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Germany's contribution to the forest and climate protection programme REDD+

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GERMANY'S CONTRIBUTION TO THE FOREST AND CLIMATE PROTECTION PROGRAMME REDD+

Synthesis study

2020

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The synthesis study provides evidence-based insights into the results and impact of REDD+ measures that have been designed, financed, and implemented by or on behalf of German actors. It is the first inter-ministerial study by the German Institute for Development Evaluation (DEval) that encompasses measures commissioned by three different Federal Ministries.

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EXECUTIVE SUMMARY

Climate change is one of the greatest challenges in our time and requires drastic changes in the way people interact with nature. Forests provide vital ecosystem goods and services, such as water regulation, soil fertility, and the conservation of biodiversity. They also contribute significantly to the regulation and mitigation of, and adaptation to, climate change. Deforestation and forest degradation in developing and emerging countries lead to significant greenhouse gas (GHG) emissions that undermine climate-change mitigation and adaptation efforts. The international REDD⁺¹ framework aims to strengthen mitigation efforts by reducing emissions from and enhancing carbon stocks in forested lands, and investing in low-carbon paths to sustainable development.

This study aims to synthesize existing knowledge about the performance and impact of REDD+ measures supported by Germany between 2008 and 2018. To this end, on the basis of primary and secondary data we analysed 30 German REDD+ measures with reference to the Development Assistance Committee of the Organisation for Economic Co-operation and Development (OECD DAC) criteria, namely relevance, effectiveness, efficiency, sustainability, and overarching (development) impact. The synthesis is the first inter-ministerial study by the German Institute for Development Evaluation (Deutsches Evaluierungsinstitut der Entwicklungszusammenarbeit, DEval) that encompasses measures commissioned by three different Federal Ministries: the Federal Ministry for Economic Cooperation and Development (Bundesministerium für Wirtschaftliche Zusammenarbeit und Entwicklung, BMZ), the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (Bundesministerium für Umwelt, Naturschutz und Nukleare Sicherheit, BMU), and the Federal Ministry of Food and Agriculture (Bundesministerium für Ernährung und Landwirtschaft, BMEL).

Since the contribution to REDD+ marks only one among several components of Germany's broad international development cooperation portfolio in support of forest conservation and the sustainable use of its resources, this study takes no account of a significant number of German development cooperation measures relevant to the forestry and land-use sector in partner countries. These also focus on the establishment of agroforestry systems, deforestation-free supply chains, legal logging schemes, and protected areas, to name but a few, and are related, for instance, to international processes such as the UN Convention on Biological Diversity (CBD), the New York Declaration on Forests (NYDF), the Bonn Challenge, the UN Forum on Forests (UNFF), and EU Forest Law Enforcement, Governance and Trade (FLEGT).

Despite the supposedly straightforward idea of REDD+ incentivizing the successful reduction of emissions caused by deforestation and forest degradation through performance- or results-based payments (PBP or RBP), REDD+ is difficult to implement through simple blueprint solutions. The implementation of RBP requires various political, legal, and technical elements within countries, which is why most countries first have to undergo readiness processes to establish those framework conditions. This includes the establishment of a national REDD+ strategy or action plan, robust monitoring systems, and valid approaches to measurement, reporting, and verification (MRV), among others. Moreover, because of a highly complex and context-dependent web of direct and indirect drivers enmeshed in a globalized system of trade, the dynamics of such multi-sectoral and multi-layered issues like deforestation and forest degradation remain difficult to understand (Weatherley-Singh and Gupta, 2015). It needs to be acknowledged that there are limited possibilities for international technical and financial cooperation to address, for instance, the political economies and socio-economic forces that underpin deforestation and degradation in many partner countries.

¹ Abbreviation for: Reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries.

Key findings

The overall REDD+ experience

- In sum, the German experience with REDD+ is largely consistent with the global experience, including the finding that, contrary to broadly shared and optimistic initial expectations, the instrument has not been a rapid and cheap way of reducing emissions in the forest sector. Most countries have not been ready for REDD+ implementation from the start and needed considerable readiness support. Nonetheless, REDD+ countries have made notable progress in various areas, including MRV capacities, yet with heterogeneous results regarding the achievements at outcome level.
- The German REDD+ measures represented in this study support countries mainly with regard to technical, financial, and political aspects in their readiness phases and are therefore relevant and appropriate.
- The German experience reaffirms recent research insights that the need for readiness efforts in preparing countries for REDD+ have been broadly underestimated, especially regarding the complexity and strains that drivers of deforestation, as well as governance and technical challenges, would put on partner and donor countries.
- With limited ability to effectively counter forceful drivers of deforestation and forest degradation, the contribution of the REDD+ activities to reducing emissions from deforestation and forest degradation as well as to conserving and sustainably managing forests and enhancing forest carbon stocks in developing countries has so far been limited.
- This slow progress is accompanied by growing worries and criticism among stakeholders in partner countries who have invested in establishing requirements, but have not (yet) received payments, or who doubt sufficient future finance as they move toward scaling up their efforts toward phase 3 (results-based payments).
- Still, our analysis suggests that the decade-long (German) engagement in REDD+, and forest conservation more generally, has led to notable changes in the partner countries – particularly regarding the renewed attention on forests and the matters of Indigenous Peoples and rural communities.

German influence on further development of REDD+ at the international level

- German efforts have helped shape and advance the development of the REDD+ concept internationally by providing evidence on how REDD+ implementation of RBP works in practice, for example in the case of REDD Early Movers (REM) and the Amazon Fund. More specifically, the “stock and flow” approach introduced by REM, which rewards both protection of forests (stock) and the reduction of deforestation (flow), has contributed to the international discussion on benefit-sharing.

Performance of specific German measures

- While Forest Carbon Partnership Facility’s (FCPF) Carbon Fund had (at the time of our analysis) still not disbursed results-based payments, Germany’s REM programme² has successfully tested the delivery of results-based payments. With a focus on rewarding past successful reductions in emissions from deforestation, the instrument provides valuable first lessons on the design of RBP processes and is an important basis for trust building among partners.

² FCPF’s Carbon Fund and Germany’s REM programme are the two notable existing funding structures focused on results-based payments (RBPs) in the forest sector. Both follow the principal idea of compensating partner countries for successful emission reductions (ERs).

- Beyond that, and given the fact that most partner countries still needed considerable support to establish the framework conditions necessary to receive RBP via REDD+, the majority of German measures have focused on readiness activities. As a matter of fact, verifiable reductions in GHG emissions in the forest sector have (not yet) been achieved.
- More generally, German measures have contributed to “improved forest governance”, more inclusive governance structures, and strengthened monitoring and MRV capacities, often linked to general development and capacity-building issues, rather than climate-change mitigation considerations. Since it is difficult to infer an actual influence of readiness outputs on the state of forests in partner countries, performance and hence payments are broadly pending. This has fuelled legitimacy issues. While partner countries point to the financial uncertainty and lack of incentives for their (readiness) efforts, institutions and the interested public in Germany question whether significant expenditure has led to actual emission reductions in partner countries.
- The prior two aspects are often interpreted as a failure of (German) REDD+ support by design. However, they may rather be seen as a sign of flawed communication and excessive or misguided expectations about what REDD+ is and can possibly achieve where, and how fast.
- Analysed German measures have principally been relevant to key actors in recipient countries, not least by sensitively reacting to the different prerequisites and policy agendas, whereas most support was intended to get the various partner countries “ready for REDD+”, for example by establishing different political, legal, and technical elements needed for national implementation.
- The analysis has highlighted the uniqueness of the German engagement, in particular with regard to its implementing organizations. The combination of technical and financial cooperation allows for integrated approaches. In the case of REM, for instance, KfW Development Bank (Kreditanstalt für Wiederaufbau, KfW) implements the results-based finance (RBF) scheme, while the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) supports partners in meeting the requirements for receiving RBP.
- The analysis has shown that long-term partnerships and the long-standing presence of implementing organizations in partner countries can be an important success factor, especially for complex measures. These long-term relations have provided privileged access to key decision-makers.
- While Germany, Norway, and the United Kingdom (GNU) exhibit high levels of coordination and knowledge exchange at a higher political level, the analysis has shown that coordination on the ground, i.e., between German implementing organizations and implementing entities of other bi- and multilateral donors – such as the FCPF or UN-REDD Programme (UN-REDD) – has often been challenging.
- In terms of efficiency, the analysis has shown that a number of measures were delayed due to complications during implementation and in line with the nature of a new idea; while at the same time most measures stayed in budget.
- Securing human and financial resources for the sustainability of outputs achieved through REDD+ activities remains a challenge for partner countries. Apart from the unexpectedly high efforts for readiness and a need for reliable future finance (for an RBP instrument) sustainability is mainly jeopardized by detrimental political interests and governance conditions in partner countries.

Building on these results, we have elaborated some discussion points which, in our view, may not only be relevant to strengthening REDD+ implementation but also for creating a better understanding of *what* German actors are doing *where* exactly. With a more proactive approach to transparency about concepts, assumptions about and experiences with REDD+, implementing actors could, for instance, address general misconceptions about REDD+.

Implications

Acknowledging the fact that German development cooperation institutions or their partners may not have influence over all the implications outlined, the following list may serve as an initial basis for discussions among the various partners engaged in REDD+ support. In fact, relevant German stakeholders are already discussing a number of them. Specifically our results point to the following implications:

1. **Implications that require the revision of REDD+ strategies and portfolios**, taking into account key lessons learnt. Actors may focus on various aspects:
 - a. Update key objectives and priorities, taking into account the political economy of development agendas in partner countries, as well as the powerful drivers of deforestation, both within and outside partner countries (from producer to consumer).
 - b. Promote cross-sectoral approaches in REDD+ implementation across all ministries that better align REDD+ with other efforts supported by Germany, such as strategies on deforestation-free supply chains.
 - c. Make private and finance sector actors more responsible for sustainable land-use practices and accountable as key agents of deforestation, and ideally functioning as change agents. This could either imply developing new and innovative measures in the German REDD+ portfolio that explicitly focus on new forms of inter-sectoral integration in land-use planning or policy making, or truly collaborative cross-sectoral dialogue and planning. This requires keeping in mind pertaining power imbalances and the need to change not only narratives but mind-sets and political will.
 - d. Strengthen the collaboration and cooperation between key target groups in partner countries including ministries and agencies working on agriculture, finance, economic development, infrastructure, and mining, among others. In this context, civil society actors should be institutionally strengthened.
 - e. Consolidate the international coordination with other donors and institutions, by discussing higher carbon prices and REDD+ budgets, or how to deal with countries with particularly bad governance but high relevance for forest conservation, for example.
 - f. For the readiness phase, consider experimenting with RBP for political milestones to spur progress.
 - g. Refocus themes and regions of the REDD+ support and portfolio, especially considering a more efficient use of funds, by refraining from “piling up” on the activities of other donors in particularly promising themes, countries, or districts, for example; proactively identify persisting thematic and regional blind spots for support and coordinate implementation, accordingly.
2. **Implications for coordination:**
 - a. Intensify the existing inter-ministerial coordination and consultation in Germany beyond the formal consultation processes.
 - b. Utilize the different core competencies, experience, and financing opportunities, while avoiding inefficiencies and trade-offs; such coordination should explicitly also extend beyond BMZ, BMU, and BMEL, e.g. the Federal Ministry of Finance (Bundesministerium der Finanzen, BMF), considering the trade-related drivers of deforestation in Germany.
3. **Implications for communication and political discourse:** bring deforestation to the front of political discussions around global (agriculture) supply chains, particularly on commodities known for driving deforestation (i.e. soy, cattle, palm oil, timber, pulp, and paper). Policy reform in Germany (and Europe) that addresses perverse incentives in the agricultural sector (e.g. subsidies) or consumption-related pull factors for deforestation will have a major role to play.
4. **Implications for transparency and learning:** the opportunity and already existing willingness to approach transparency and learning more systematically.
 - a. Establish a more coherent and transparent reporting system, for instance a joint database, covering information on all German REDD+ measures with comparable key parameters and lessons learnt from implementation. Such a system would allow a better understanding (and revision) of German

contributions and impact, while increasing the coherence between measures of different organizations. Accompanying research projects may enhance the quality and transparency of measures and support a systematic and reflexive learning practice.

- b. Another opportunity lies in a more proactive approach to communication and exchange with the interested public around German REDD+ support. Coordinated by lead ministries and enacted by implementing organizations, this approach could help to avoid misconceptions and enhance an open debate about measures, objectives, and achievements.

ZUSAMMENFASSUNG

Gegenstand und Ziele der Synthesestudie

Der Klimawandel gehört zu den größten Herausforderungen für die Menschheit. Nur einschneidende Veränderungen im Umgang mit der Natur können seine weitreichenden Auswirkungen stoppen oder reduzieren. Wälder tragen wesentlich zur Minderung der Treibhausgaskonzentration in der Atmosphäre und zur Anpassung an den Klimawandel bei. Gleichzeitig haben Entwaldung und Walddegradierung vor allem in Entwicklungs- und Schwellenländern einen großen Anteil an den weltweiten Treibhausgasemissionen. Der Erhalt und die nachhaltige Nutzung von Wäldern haben daher eine zentrale Bedeutung für die Bekämpfung des Klimawandels und für die Erreichung der Ziele der Vereinten Nationen (UN) für eine nachhaltige Entwicklung (Sustainable Development Goals, SDGs).

REDD+³ steht für die Verringerung von Emissionen aus Entwaldung und der Degradierung von Wäldern und ist ein Instrument im Rahmen des internationalen Klimaregimes der Klimarahmenkonvention der Vereinten Nationen (United Nations Framework Convention on Climate Change, UNFCCC). Es soll in Entwicklungs- und Schwellenländern Entwaldung und Walddegradierung reduzieren sowie Wälder und ihre Biodiversität schützen.

Als ergebnisbasiertes Instrument der Klimafinanzierung soll REDD+ beteiligte Länder für nachweisliche Emissionsreduktionen im Waldsektor monetär kompensieren. Die Länder erhalten Anreize dafür, Emissionen aus Entwaldung und Walddegradierung zu mindern, eine nachhaltige Waldbewirtschaftung zu fördern und Wälder als Kohlenstoffspeicher aufrechtzuerhalten oder zu erweitern. Gegenüber den bisherigen, oft nur punktuellen Erfahrungen mit Zahlungen für Ökosystemdienstleistungen (payments for ecosystem services, PES) hebt das Instrument REDD+ die ergebnisbasierte Klimafinanzierung damit auf eine neue Stufe.

REDD+ ist ein wichtiges Instrument des breiten Portfolios der deutschen Entwicklungszusammenarbeit (EZ) zum Waldschutz und zur nachhaltigen Nutzung natürlicher Ressourcen. Dieser entwicklungspolitische Stellenwert und das Lernpotenzial, das im Hinblick auf die Umsetzung von REDD+ besteht, veranlassten das Deutsche Evaluierungsinstitut der Entwicklungszusammenarbeit (DEval) dieses Instrument näher zu untersuchen. Die vorliegende Synthese ist die erste vom DEval veranlasste ressort-übergreifende Studie, die Maßnahmen dreier Bundesressorts umfasst: das Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (BMZ), das Bundesministerium für Umwelt, Naturschutz und nukleare Sicherheit (BMU) und das Bundesministerium für Ernährung und Landwirtschaft (BMEL).

Die Synthesestudie

- fasst die vorliegende Evidenz über die von Deutschland unterstützten REDD+-Maßnahmen zwischen 2008 und 2018 zusammen,
- bereitet diese Evidenz bezüglich der Ergebnisse und Wirkungen der deutschen REDD+-Maßnahmen auf,
- soll den Austausch von Wissen, Ergebnissen und zentralen Erkenntnissen zwischen dem BMZ, dem BMU, dem BMEL, der KfW Entwicklungsbank (Kreditanstalt für Wiederaufbau, KfW), der Deutschen Gesellschaft für Internationale Zusammenarbeit (GIZ) sowie weiteren Partnern fördern und
- zieht Schlussfolgerungen und leitet daraus Implikationen für die zukünftige Ausgestaltung und Implementierung deutscher REDD+-Maßnahmen und REDD+-Finanzierung ab.

Mit dem Fokus auf REDD+ finden viele andere für die Forst- und Landnutzung relevante Maßnahmen in den Partnerländern der deutschen EZ in dieser Synthesestudie bewusst keine Berücksichtigung. Dazu zählen die Einführung von Agroforstsystemen, entwaldungsfreie Lieferketten, legale Holzeinschlagprogramme und die

³ Abkürzung für: *Reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries.*

Einrichtung von Schutzgebieten. Dasselbe gilt auch für andere von Deutschland unterstützte Maßnahmen bei der Umsetzung internationaler Abkommen und Prozesse. Dazu gehören das Übereinkommen über die biologische Vielfalt (Convention on Biological Diversity, CBD), die New Yorker Walddeklaration (New York Declaration on Forests, NYDF), die Bonn Challenge, das UN-Waldforum (United Nations Forum on Forests, UNFF) und der Aktionsplan der Europäischen Union für Rechtsdurchsetzung, Politikgestaltung und Handel im Forstsektor (EU FLEGT).

Methodisches Vorgehen

Datenquellen

1. Für diese Synthesestudie wurden Primär- und Sekundärdaten zu deutschen REDD+-Maßnahmen und REDD+ im Allgemeinen analysiert. Dazu gehörten strategische, operative und evaluierende Dokumente der Auftraggeber und Durchführungsorganisationen, insbesondere Projekt- und Programmvorschläge sowie Zwischen- und Abschlussberichte der Durchführungsorganisationen. Die Daten wurden vom BMEL und BMZ, von der GIZ, der KfW sowie von der Zukunft-Umwelt-Gesellschaft (ZUG) gGmbH im Auftrag des BMU zur Verfügung gestellt.

Auf Basis einer systematischen, kriterienbasierten Fallauswahl wurden 30 von insgesamt über 100 REDD+-Maßnahmen mit deutscher Beteiligung im Detail untersucht. Die Maßnahmen wurden auf Basis von vier Kriterien priorisiert:

- a. Übereinstimmung mit dem von der UNFCCC vertretenen Verständnis von REDD+,
- b. Aktivitäten bereits abgeschlossen,
- c. Fokus und Kernaktivitäten, die sich auf die Umsetzung vor Ort konzentrieren, und
- d. ein Fördervolumen von mindestens 750.000 Euro.

Auf Basis dieser systematischen Auswahl lassen sich mit der vorliegenden Analyse Schlussfolgerungen auf das deutsche REDD+ Portfolio ziehen. Die vorliegende Synthesestudie ermöglicht eine erste Bestandsaufnahme, die einen Eindruck von der Implementierung von REDD+ in den Partnerländern vermitteln und erkennbare Muster – sowohl im Hinblick auf Erfolge als auch auf Herausforderungen – aufzeigen soll.

2. Von Oktober 2019 bis Februar 2020 wurden 35 halbstrukturierte Interviews mit 39 Personen durchgeführt. Die Interviewpartner*innen waren:
 - Akteure, die in die Ausgestaltung, Finanzierung und Umsetzung deutscher REDD+-Maßnahmen involviert sind oder waren,
 - Akteure, die in REDD+-Maßnahmen anderer Geber und Initiativen involviert sind oder waren, sowie Vertreter*innen internationaler Organisationen, die in den Bereichen REDD+ und/oder Waldschutz tätig sind oder waren, als auch
 - Wissenschaftler*innen und Vertreter*innen von Nichtregierungsorganisationen (NROs), Denkfabriken und Netzwerken, die zu REDD+ und/oder Waldschutz arbeiten.
3. Die genutzte Sekundärliteratur zu REDD+ und deutschen REDD+-Maßnahmen umfasst begutachtete (peer reviewed) wissenschaftliche Literatur, Berichte internationaler Organisationen sowie Berichte von Forschungseinrichtungen, Denkfabriken und NROs. Bei der Auswahl nicht-begutachteter Quellen wurden die vom Weltklimarat (Intergovernmental Panel on Climate Change, IPCC) angewandten Kriterien genutzt. Zu diesen zählt neben der Glaubwürdigkeit der jeweiligen Institutionen auch die Aktualität der Ergebnisse.

Datenanalyse

Die Datenanalyse orientierte sich an den zum Zeitpunkt der Analyse gültigen Evaluierungskriterien des Entwicklungsausschusses (Development Assistance Committee, DAC) der Organisation für wirtschaftliche Zusammenarbeit und Entwicklung (Organisation for Economic Co-operation and Development, OECD):

- **Relevanz:** Ausmaß der Übereinstimmung der Ziele und der Konzeption einer Maßnahme mit den Bedarfen der Zielgruppen, den Politiken und Zielen der Partner und Träger, globalen Entwicklungsagenden sowie der entwicklungspolitischen Grundausrichtung der Bundesregierung,
- **Effektivität:** Ausmaß, in dem die durch eine Maßnahme erreichten Ergebnisse (outputs) zur Erreichung der übergeordneten Ziele (outcomes) beitragen oder erwartbar beitragen werden,
- **Effizienz:** Angemessenheit der für eine Maßnahme eingesetzten Ressourcen im Hinblick auf die erreichten Ergebnisse und Ziele,
- **Nachhaltigkeit (im Sinne von Dauerhaftigkeit):** Ausmaß, in dem die Ergebnisse und Wirkungen einer Maßnahme über das Ende der Unterstützung hinaus fortbestehen, und
- **übergeordnete (entwicklungspolitische) Wirkungen:** Ausmaß, in dem eine Maßnahme dazu beigetragen hat, die angestrebten entwicklungspolitischen Wirkungen zu erreichen.

Die Theorie des Wandels (theory of change) für REDD+ spiegelt die Erwartungen und Annahmen der Akteure wider, die in die Maßnahme und den zugehörigen Prozess involviert sind. Für die Analyse und die Einordnung der Ergebnisse ist relevant, dass sich die Theorie des Wandels im Laufe der Jahre merklich verändert hat. War REDD+ anfangs ein forstbasierter Ansatz zur Eindämmung des Klimawandels durch Emissionsreduktionen im Waldsektor, ist es heute ein breit gefasstes Rahmengerüst, unter dem neben Emissionsreduktionen weitere vielseitige Ziele verfolgt werden. Dabei ist eine starke Entwicklungskomponente zu erkennen, welche auf umfassende Transformationen in der Landnutzung abzielt.

Zentrale Erkenntnisse

Trotz der vermeintlich einfachen Idee, durch ergebnisbasierte Zahlungen (results-based payments, RBP) Emissionen durch Entwaldung und Walddegradierung zu reduzieren, lässt sich das vorrangige Ziel von REDD+ ausschließlich mit allgemeingültigen Musterlösungen kaum erreichen. So müssen die Partnerländer in Vorbereitung der RBP-Phase in der Regel erst verschiedene politische, rechtliche und technische Rahmenbedingungen schaffen. Dafür müssen die meisten Länder zunächst diverse Vorbereitungsprozesse (readiness phase) durchlaufen, zum Beispiel nationale REDD+-Strategien und Aktionspläne entwickeln, robuste Monitoring-Systeme aufbauen sowie valide Ansätze für die Berichterstattung und Verifizierung quantifizierbarer Emissionsreduktionen erarbeiten.

Das Geflecht direkter und indirekter Treiber für Entwaldung und Degradierung, die in das globalisierte Handelssystem eingebunden sind, ist sehr komplex und kontextabhängig. Die sozioökonomischen Faktoren in diesem Geflecht, die entwaldungstreibende Prozesse wie Bergbau, Energieholzgewinnung und industrielle Landwirtschaft oder Subsistenzlandwirtschaft bedingen, können außerhalb des Wirkungshorizonts des Landes liegen wie die Nachfrage (zum Beispiel nach Fleischprodukten) oder Preissignale in internationalen Konsumgütermärkten. Es gibt aber auch zahlreiche landesspezifische Aspekte wie unklare und unsichere Landtitel, Korruption und mangelnde soziale Absicherungssysteme. Oft können die sektorübergreifenden und vielschichtigen Probleme der Entwaldung und Walddegradierung in ihrer Komplexität und Dynamik nur schwer in allen Wirkungszusammenhängen nachvollzogen werden. Auch sind damit die Möglichkeiten der Technischen und Finanziellen Zusammenarbeit zumeist begrenzt, um den wirtschaftspolitischen und sozioökonomischen Kräften zu begegnen, welche die Entwaldung und Degradierung in den Partnerländern vorantreiben.

Gesamteinschätzung von REDD+

- Die deutschen und internationalen Erfahrungen mit REDD+ stimmen weitgehend überein. Das gilt auch für die Erkenntnis, dass das Instrument nicht die zu Beginn weit verbreiteten Erwartungen erfüllen konnte, die Emissionen im Waldsektor schnell und günstig zu reduzieren. Dennoch erzielten die REDD+-Länder bemerkenswerte Fortschritte. Sie bauten unter anderem ihre Kapazitäten zur Messung, Berichterstattung und Verifizierung (Measurement, Reporting and Verification, MRV) auf. Die Erreichung ihrer Outcome-Ziele fiel allerdings unterschiedlich aus.

- Die meisten Partnerländer waren zu Beginn nicht ausreichend für die Umsetzung von REDD+ vorbereitet und benötigten erhebliche Unterstützung. Die in dieser Studie betrachteten deutschen REDD+-Maßnahmen unterstützten die Länder in dieser Vorbereitungsphase in technischer, finanzieller und politischer Hinsicht und waren oder sind daher relevant.
- Die deutsche Erfahrung bestätigt die jüngsten Forschungserkenntnisse, dass der nötige Aufwand für die REDD+-Vorbereitung in vielen Ländern weitgehend unterschätzt wurde. Die Komplexität der Treiber der Entwaldung und Walddegradierung sowie grundlegende Probleme hinsichtlich guter Regierungsführung und angemessener technischer Ansätze stellen Partner- und Geberländer weiterhin vor große Herausforderungen.
- Da es (noch) nicht gelungen ist, den Treibern der Entwaldung und Walddegradierung hinreichend wirksam entgegenzuwirken, konnte die Verringerung von Emissionen aus Entwaldung und Schädigung von Wäldern und der Erhalt bestehender und der Aufbau neuer Wälder bislang nicht wie erhofft erreicht werden. Damit ist der Beitrag des REDD+-Rahmenwerks zur Erreichung dieser Ziele begrenzt.
- Dieser unerwartet langsame Fortschritt führt bei den Beteiligten in den Partnerländern zu Sorge und Ungeduld, die bereits in die Anforderungen für REDD+ investierten, sich aber bislang noch nicht für Zahlungen qualifizieren konnten oder auf die in Aussicht gestellten Auszahlungen warten. Letzteres gilt insbesondere für den Carbon Fund der Forest Carbon Partnership Facility (FCPF), dessen Mittelabfluss in die Länder stockt. Auch besteht Zweifel, dass für Phase 3 (RBP), in der ergebnisbasierte Zahlungen vorgenommen werden sollen, ausreichend finanzielle Mittel zur Verfügung stehen werden. In diesem Kontext könnte die bereits diskutierte Vergütung von politischen Meilensteinen dazu beitragen, das Engagement der Partnerländer sicherzustellen.
- Dennoch führte das jahrzehntelange deutsche und internationale Engagement für REDD+ und für den Waldschutz zu bemerkenswerten Veränderungen im Hinblick auf die erneute politische Aufmerksamkeit für Wälder sowie für die Belange der indigenen Völker und der ländlichen Bevölkerung. Ferner hat sich in vielen Ländern das technische und praktische Know-how für Waldbewirtschaftung, Monitoring und Inventarisierung verbessert.

Der Einfluss Deutschlands auf die Weiterentwicklung von REDD+ auf internationaler Ebene

- Die deutsche EZ gestaltete das REDD+-Konzept international mit und war stark an dessen Weiterentwicklung und Verbreitung beteiligt. Sie lieferte Belege dafür, wie die REDD+-Umsetzung von ergebnisbasierten Zahlungen in der Praxis funktioniert. Dies gilt speziell für das REDD-Early-Movers (REM)-Programm und den Amazonasfonds. Der von REM eingeführte, innovative *stock-and-flow*-Ansatz, der sowohl den Schutz der Wälder (stock) als auch die Reduzierung der Entwaldung (flow) belohnt, trug zudem zur internationalen Diskussion über eine gerechte Teilung der Gewinne (benefit sharing) bei.

Durchführung deutscher REDD+-Maßnahmen

- Während der FCPF Carbon Fund zum Zeitpunkt der Analyse noch keine ergebnisbasierten Zahlungen getätigt hatte, hatte das deutsche REM-Programm bereits ergebnisbasierte Zahlungen vorgenommen. Mit dem Schwerpunkt auf der Belohnung früherer Erfolge bei der Reduzierung von Emissionen aus Entwaldung liefert das Instrument wertvolle erste Erkenntnisse für die Gestaltung von ergebnisbasierten Zahlungsprozessen. Zudem dient es als wichtige Grundlage für die Vertrauensbildung zwischen den Partnern.
- Weil die meisten Partnerländer noch erhebliche Unterstützung benötigten, um die notwendigen Rahmenbedingungen für ergebnisbasierte Zahlungen durch REDD+ zu etablieren, konzentrierte sich die Mehrzahl der deutschen Maßnahmen auf Vorbereitungsaktivitäten (readiness phase). Tatsächlich konnten die meisten Partnerländer noch kaum nachprüfbare Reduktionen der Treibhausgasemissionen im Waldsektor erreichen.

- Die vorliegende Evidenz legt nahe, dass die deutschen Maßnahmen zu einer verbesserten Waldbewirtschaftung, zu inklusiveren Governance-Strukturen sowie zu besseren Monitoring- und Berichterstattungskapazitäten beitrugen. Sie widmeten sich oft eher allgemeinen Fragen der Entwicklung und des Aufbaus von Kapazitäten als Strategien zur Eindämmung des Klimawandels. Deshalb ist es nur bedingt möglich, aus den Ergebnissen der deutschen Unterstützung einen tatsächlichen Einfluss auf den Zustand der Wälder in den Partnerländern abzuleiten. Dies hat Fragen der Legitimität des Instruments befördert: Zum einen weisen die Partnerländer auf die finanzielle Unsicherheit und mangelnde Anreize für ihr grundsätzliches Engagement und ihre Anstrengungen hin. Zum anderen stellen Institutionen und die interessierte Öffentlichkeit in Deutschland REDD+ infrage. Besonders kritisch betrachten sie das Verhältnis zwischen den erheblichen Ausgaben und den tatsächlichen Emissionsreduktionen in den Partnerländern.
- Diese Aspekte werden oft als ein prinzipielles Scheitern der (deutschen) REDD+-Unterstützung interpretiert. Sie sind aber eher ein Zeichen einer fehlerhaften Kommunikation und eine Folge überhöhter oder unangemessener Erwartungen davon, was REDD+ ist und wo und wie schnell Fortschritte erreicht werden können.
- Die analysierten deutschen Maßnahmen waren für die Schlüsselakteure in den Empfängerländern auch deshalb relevant, weil sie auf deren unterschiedliche Voraussetzungen und nationale politischen Agenden reagierten. Die meiste Unterstützung war darauf ausgerichtet, die verschiedenen Partnerländer bereit für REDD+ zu machen, zum Beispiel indem für die nationale Umsetzung notwendige politische, rechtliche und technische Elemente etabliert wurden.
- Die Kombination von Technischer und Finanzieller Zusammenarbeit ist ein Alleinstellungsmerkmal des deutschen Engagements zu REDD+ und hat das Potenzial für integrierte Ansätze. So setzt die KfW vor allem im Fall von REM auf ergebnisbasierte Finanzierung, während die GIZ die Partner dabei unterstützt, die Voraussetzungen für den Erhalt von ergebnisbasierten Zahlungen zu erfüllen.
- Die Analyse der 30 REDD+-Maßnahmen hat zudem ergeben, dass etablierte Partnerschaften und die langjährige Präsenz der Durchführungsorganisationen in den Partnerländern vor allem bei langen, komplexen Vorhaben zum Gelingen beitragen können. Ein oft genanntes Ergebnis der langjährigen Präsenz vor Ort ist ein privilegierter Zugang zu wichtigen Entscheidungsträgern.
- Während Deutschland, Norwegen und das Vereinigte Königreich intensiv und auf einer höheren politischen Ebene ihre Aktivitäten koordinieren und ihr Wissen austauschen, stellt die Koordination vor Ort zwischen den Programmen deutscher Durchführungsorganisationen und jenen anderer bi- und multilateraler Geber – zum Beispiel FCPF oder UN-REDD – oftmals eine Herausforderung dar.
- In Bezug auf die Effizienz verzögerte sich die Umsetzung einer Reihe von Maßnahmen aufgrund von Komplikationen, die in der Regel mit politischen, rechtlichen oder technischen Rahmenbedingungen in den Partnerländern zusammenhingen und gemäß der Einführung einer „neuen Idee“ (ergebnisbasierte Zahlungen für Waldschutz) teilweise erwartbar waren. Gleichzeitig wurde beobachtet, dass nur wenige Maßnahmen nicht mit den ursprünglich zur Verfügung gestellten Mitteln auskamen und deshalb eine Budgeterhöhung beantragen mussten.
- Für die Partnerländer bleibt es eine Herausforderung, die personellen und finanziellen Ressourcen langfristig sicherzustellen, die es für die durch REDD+-Aktivitäten angestrebten Ergebnisse benötigt. Dies liegt insbesondere daran, dass REDD+ aufgrund der Problematik der Entwaldungstreiber statt eines (kurzfristigen) Projektansatzes prinzipiell einer viel programmatischeren und systemübergreifenden Herangehensweise bedarf. Zudem sind unerwartet große Anstrengungen nötig, bis die Partnerländer in der Lage sind, sich an REDD+ zu beteiligen, und die internationale Gebergemeinschaft muss für die Zukunft eine verlässliche Finanzierung sicherstellen. Nach wie vor gefährden entgegenlaufende politische Interessen, insbesondere von Akteuren des Agrarsektors, aber auch ein mangelnder politischer Wille in manchen Partnerländern die Nachhaltigkeit der REDD+-Maßnahmen.

Hieraus ergeben sich einige Implikationen im Hinblick darauf, wie die deutsche EZ ihre REDD+-Umsetzung stärken kann, und wie das Verständnis der deutschen REDD+-Aktivitäten verbessert werden kann.

Implikationen

Die Ergebnisse der Synthesestudie haben mehrere Implikationen, die Geber und Durchführungsorganisationen bei der Bewertung aktueller sowie bei der Konzeption künftiger REDD+-Interventionen berücksichtigen können. Die Studie zeigt zentrale Herausforderungen und Erkenntnisse (lessons learnt) auf und bietet jenen Akteuren neue Perspektiven auf, die sowohl das REDD+-Rahmenwerk als auch spezifische Maßnahmen weiterentwickeln und verbessern möchten. Die Berücksichtigung der Implikationen kann (a) die Umsetzung von REDD+ im Allgemeinen stärken und (b) zu einem besseren Verständnis der interessierten Öffentlichkeit darüber beitragen, was deutsche Akteure wo tun und welche Ergebnisse und Auswirkungen ihre Maßnahmen haben. So kann beispielsweise eine proaktivere und transparente Kommunikation – insbesondere mit Blick auf Konzepte, Annahmen und Erfahrungen mit REDD+ – generelle Missverständnisse richtigstellen, die vielen der identifizierten Herausforderungen zugrunde liegen.

Die Implikationen beziehen sich zum einen auf die politische und strategische Ebene und zum anderen auf die Implementierungsebene. Obwohl die deutschen Institutionen der EZ und ihre Partner nicht auf alle im Folgenden skizzierten Implikationen Einfluss haben, kann diese Liste als erste Grundlage für Diskussionen zwischen den Partnern, die sich an der REDD+-Unterstützung beteiligen, dienen:

1. **Implikationen im Bereich Strategie und Portfolio.** Die beteiligten Akteure können folgende Aspekte berücksichtigen:
 - a. Überarbeitung der REDD+-Strategien, -Ziele und -Prioritäten. Das DEval regt an, dass die Entwicklungsagenden der Partnerländer und die jeweiligen Treiber von Entwaldung sowohl innerhalb als auch außerhalb der Partnerländer (vom Erzeuger bis zum Verbraucher) in der Überarbeitung Niederschlag finden.
 - b. Förderung sektorübergreifender Ansätze bei der Umsetzung von REDD+. Unter anderem könnten die von Deutschland unterstützten Initiativen etwa zu entwaldungsfreien Lieferketten in sektorübergreifenden Ansätzen besser abgestimmt werden.
 - c. Stärkere Berücksichtigung der Verantwortung und Rechenschaftspflicht von Akteuren aus dem Privat- und Finanzsektor. Ihrer Rolle als Schlüsselakteure der Entwaldung, aber auch auf dem Weg hin zu nachhaltigeren Landnutzungspraktiken sollte verstärkt Rechnung getragen werden. Das DEval regt an, dass das deutsche REDD+-Portfolio verschiedene Sektoren in die Landnutzungsplanung und Politikgestaltung systematisch einbindet (einschließlich kooperativer sektorübergreifender Dialoge und Planung). Dabei muss die deutsche EZ Machtungleichgewichte im Auge behalten und bedenken, dass sich für einen starken politischen Willen im Partnerland nicht nur die Narrative, sondern auch die Denkweisen ändern müssen.
 - d. Stärkung der Zusammenarbeit zwischen verschiedenen Adressatengruppen. Die deutsche EZ sollte die Zielgruppen in den Partnerländern einschließlich der Ministerien und Ämter in den Bereichen Landwirtschaft, Finanzen, wirtschaftliche Entwicklung, Infrastruktur und Bergbau in Diskussionen und Planung einbeziehen. Zudem ist es hierbei nötig, auch zivilgesellschaftliche Organisationen zu stärken.
 - e. Konsolidierung der internationalen Abstimmung mit anderen Gebern und Institutionen hinsichtlich des Umgangs mit Ländern, die eine vergleichsweise schlechte Regierungsführung aufweisen, sowie hinsichtlich der Kohlenstoffpreis- oder Budgeterhöhungen für REDD+.
 - f. Pilotierung ergebnisbasierter Zahlungen für politische Meilensteine (statt nur für Emissionsreduktionen), um Beteiligten in den Partnerländern Anreize für Fortschritte zu bieten.
 - g. Neuausrichtung thematischer oder regionaler Schwerpunkte der REDD+-Unterstützung und des Portfolios. Hierbei ist zu berücksichtigen, dass Finanzmittel effizienter genutzt werden können. Ein Beispiel ist der Verzicht auf Maßnahmen, welche zusätzlich zum Engagement anderer Geber in vielversprechenden Themen, Ländern oder Distrikten stattfänden. Zum anderen kann die deutsche EZ – in Koordination mit Partnern – thematische und regionale Lücken gezielt und effizient füllen.

2. Implikationen im Bereich Koordination:

- a. Intensivierung der interministeriellen Koordination in Deutschland über die regulären Koordinierungsmechanismen hinaus.
- b. Nutzbarmachung unterschiedlicher Kernkompetenzen, Erfahrungen und Finanzierungsmöglichkeiten von BMZ, BMU und BMEL und darüber hinaus (z.B. Bundesministerium der Finanzen, BMF) – unter Berücksichtigung der oft handelsbasierten Treiber von Entwaldung in Deutschland.

3. Implikationen im Bereich Kommunikation und politischer Diskurse.

Um die rohstoffbedingte Entwaldung in globalen (Agrar-)Lieferketten wie Soja, Rinderzucht, Palmöl, Holz und Papier zu reduzieren, ist es notwendig diese Thematik über die Parlamente und ministerielle Öffentlichkeitsarbeit gezielt in das Zentrum der politischen Diskussion zu rücken. Politikreformen in Deutschland und Europa, mit deren Hilfe negative Anreize wie Subventionen im Agrarsektor angegangen oder konsumbezogene Pull-Faktoren reduziert werden können, sind hierbei von großer Bedeutung.

4. Implikationen im Bereich Transparenz und Lernen:

- a. Einrichtung eines kohärenteren und transparenteren Berichtssystems, zum Beispiel einer Datenbank, in der vergleichbare Schlüsselparmeter und Lernerfahrungen aller deutschen REDD+-Maßnahmen dargestellt werden. Dies ermöglicht ein besseres Verständnis über die deutschen Beiträge und deren Auswirkungen sowie über die Kohärenz zwischen Maßnahmen und Organisationen. Begleitende Forschungsprojekte können die Qualität und Transparenz der Maßnahmen verbessern und eine systematische und reflexive Lernpraxis unterstützen.
- b. Ein proaktiverer Ansatz zur Kommunikation mit der interessierten Öffentlichkeit. Eine verbesserte Kommunikation könnte bestehende Missverständnisse zur deutschen REDD+-Unterstützung vermeiden und eine offene Debatte über Maßnahmen, Ziele und Erfolge fördern. Diese könnte von den oben genannten Ministerien koordiniert und von den Durchführungsorganisationen umgesetzt werden.

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ABBREVIATIONS AND ACRONYMS

A/R	Afforestation and Reforestation
BMEL	Federal Ministry of Food and Agriculture (Bundesministerium für Ernährung und Landwirtschaft)
BMF	Federal Ministry of Finance (Bundesministerium der Finanzen)
BMU	Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (Bundesministerium für Umwelt, Naturschutz und Nukleare Sicherheit)
BMZ	Federal Ministry for Economic Cooperation and Development (Bundesministerium für Wirtschaftliche Zusammenarbeit und Entwicklung)
CAFI	Central African Forest Initiative
CBD	Convention on Biological Diversity
CBFF	Congo Basin Forest Fund
CCD	Convention to Combat Desertification
CDM	Clean Development Mechanism
CIFOR	Center for International Forestry Research
COP	Conference of the Parties
CORSIA	Carbon Offsetting and Reduction Scheme for International Aviation
DAC	Development Assistance Committee
DEval	German Institute for Development Evaluation (Deutsches Evaluierungsinstitut der Entwicklungszusammenarbeit)
ER	Emission Reduction
EU ETS	European Union Emissions Trading System
ERPA	Emission Reductions Payment Agreement
FAO	Food and Agriculture Organization of the United Nations
FCPF	Forest Carbon Partnership Facility
FIP	Forest Investment Program
FLEGT	Forest Law Enforcement, Governance and Trade
FoEI	Friends of the Earth International
FPP	Forest Peoples Programme
FREL	Forest Reference Emissions Level
FRL	Forest Reference Level
GCF	Green Climate Fund

GEF	Global Environment Facility
GHG	Greenhouse Gas
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GNU	Germany, Norway, and the United Kingdom
ha	Hectare
ICAO	International Civil Aviation Organization
IKI	International Climate Initiative (Internationale Klimaschutzinitiative)
INPE	National Institute for Space Research (Instituto Nacional de Pesquisas Espaciais)
IPCC	Intergovernmental Panel on Climate Change
ISFL	BioCarbon Fund Initiative for Sustainable Forest Landscapes
IUCN	International Union for Conservation of Nature
JICA	Japan International Cooperation Agency
KfW	KfW Development Bank (Kreditanstalt für Wiederaufbau)
KP	Kyoto Protocol
MRV	Measurement, Reporting, and Verification
NDC	Nationally Determined Contribution
NFMS	National Forest Monitoring System
NGO	Non-Governmental Organization
NICFI	Norway's International Climate and Forest Initiative
NYDF	New York Declaration on Forests
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
PA	Paris Agreement
PBP	Performance-Based Payments
PES	Payments for Environmental Services
RBF	Results-Based Finance
RBP	Results-Based Payments
RED	Reducing Emissions from Deforestation
REDD	Reducing Emissions from Deforestation and Forest Degradation
REDD+	Reducing Emissions from Deforestation and Forest Degradation and the Role of Conservation, Sustainable Management of Forests and Enhancement of Forest Carbon Stocks in Developing Countries
REM	REDD Early Movers

RL	Reference Level
R-PP	Readiness Preparation Proposal
SDG	Sustainable Development Goal
SFM	Sustainable Forest Management
SIS	Safeguards Information System
tCO ₂ e	Tonnes of CO ₂ Equivalent
ToC	Theory of Change
UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNFF	United Nations Forum on Forests
UN-REDD	UN-REDD Programme
USAID	United States Agency for International Development
WWF	World Wide Fund for Nature
ZUG	Zukunft – Umwelt – Gesellschaft gGmbH

1. INTRODUCTION

1.1. Background of REDD+

There is a broad scientific consensus that the conservation and sustainable use of forests is key to combating climate change and to achieving the United Nations (UN) Sustainable Development Goals (SDGs) (Intergovernmental Panel on Climate Change, IPCC, 2018; Bukoski et al., 2018). Besides providing wood and non-wood products, forests provide vital ecosystem goods and services, in particular in terms of carbon sequestration and storage, water regulation, soil fertility, and conservation of biodiversity (Seymour and Busch, 2016). Notably, around 1.6 billion people – including 350 million of the world’s poorest – depend on forests for their livelihoods, “not just for food but also for fuel, livestock grazing and medicine” (Chan, 2012, p.7).

According to World Bank data, 1.3 million km² of forests have been lost between 1990 and 2015 (World Bank, 2016). Despite intensified political efforts and a growing number of public and private commitments to slow down deforestation, forest loss continues across the world, mostly in Latin America, Southeast Asia, and Sub-Saharan Africa (Seymour, 2018; Food and Agriculture Organization of the United Nations, FAO, 2018a). This development prompts questions as to what extent the international framework⁴ known as *Reducing Emissions from Deforestation and Forest Degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries* (REDD+) under the United Nations Framework Convention on Climate Change (UNFCCC) has been able to deliver on its promises. Recent debates, also in the German context (Kill, 2019), suggest that REDD+ has failed to meet its objectives as it did not lead to significant emission reductions in the forest sector. Apart from a genuine risk of generalizing negative experiences of individual measures or countries, critical assessments need to be clear on what exactly they refer to. In fact, the objectives and expectations associated with REDD+ have changed significantly over time, which means that the Theory of Change (ToC) for REDD+ – i.e., the overall theory about how and why REDD+ will work – has not been consistent. Depending on what ToC is taken as a basis, the assessment of REDD+ leads to different results.

The idea of mitigating climate change through avoided deforestation is not a completely new one, and the development of REDD+ under UNFCCC drew heavily on, and also benefitted from, the pioneering activities, especially in voluntary markets (Corbera and Schroeder, 2011; Reinecke et al., 2014). As far back as the 1990s, as in the case of the Activities Implemented Jointly (AIJ), such projects are often incorrectly labelled REDD+ (ex post). Earlier failures contributed to the sobering picture of early REDD+ action.

In fact, the core elements of the REDD+ framework were institutionally established under the UNFCCC only in 2007 with the Bali Action Plan, after the Clean Development Mechanism (CDM) excluded avoided deforestation due to concerns regarding permanence of the forest carbon stock and the risk of emissions “leakage” (Moutinho et al., 2005).⁵ However, the topic resurfaced in the international climate negotiations after the entry into force of the Kyoto Protocol in 2005. Extended by the 2010 Cancún Agreements, and finalized under the 2013 Warsaw Framework for REDD+, REDD+ is often depicted as a key strategy for developing countries to deliver on their Nationally Determined Contributions (NDCs) as part of the 2015 Paris Agreement (PA) on Climate Change (FAO, 2018b). The core idea behind REDD+ is to create financial incentives for developing countries to undertake actions to conserve and sustainably manage forests, thereby reducing greenhouse gas (GHG) emissions. Allowing developing countries to show their engagement under the UNFCCC, REDD+ developed comparably quickly as an international mitigation instrument and received significant political support under UNFCCC (Davis and Daviet, 2010; Pistorius, 2012).

⁴ In the literature and in practice, REDD+ is and was referred to interchangeably either as a “mechanism” or “instrument”. To avoid confusion, and considering the implications that the use of the term “mechanism” has in the UN context, we use the broader term “framework” in reference to the Warsaw Framework, which REDD+ is embedded in internationally.

⁵ It may be noted that reversal still poses a major permanence challenge in current forest-based mitigation activities; therefore, forest-based emission reductions were excluded from the European Union Emission Trading System (EU ETS) and are limited to afforestation and reforestation projects under the CDM.

Since 2007, over 50 countries have initiated national REDD+ strategies, and more than 350 REDD+ measures⁶ have been carried out across the world (Angelsen et al., 2018a). Despite the high number, REDD+ is still in a very early implementation phase and, generally speaking, overall progress toward implementation has been slower than expected, which also explains why results in terms of actual emission reductions are broadly limited (Angelsen, 2015; Brockhaus et al., 2015; Arts et al., 2019). The experience gained over the last decade(s) with significant implementation challenges in several high-profile pilot activities, as in Indonesia and Brazil, suggests that REDD+ faces complex methodological as well as governance challenges. Implementation on the ground is hampered by persisting weak forest governance structures in numerous REDD+ countries, often characterized by insufficient law enforcement, corruption, or unclear land tenure (Korhonen-Kurki et al., 2014), which partly originates in the complexity of the international framework (Pistorius, 2012). In addition, many countries have had difficulty developing strategies that satisfy the ecological and social safeguards required by donors. Those safeguards include respect for the rights of Indigenous Peoples and local communities, effective participation of stakeholders, conservation of biodiversity, and addressing risks of reversals and displacement of emissions (i.e., ensuring permanence and avoiding leakage) (UNFCCC, 2010, Appendix I).

Apart from that, stakeholders in partner countries often lack(ed) the capacities and tools to monitor and measure changes in forest area and carbon stock and to quantify carbon emissions and removals, respectively (Herold, 2009). Another challenge lies in demonstrating the “additionality” of REDD+, which requires an understanding of the drivers of deforestation on a highly disaggregated level to avoid emission reductions being claimed for forests not under threat. There have been attempts to solve the permanence issue through “buffers” (i.e. reserve forest areas) and the additionality issue through conservative baseline methodologies that specify a reference level against which emission reductions can be measured (Mertz et al., 2018). However, these approaches so far have not been universally accepted. As most REDD+ countries are still in the process of addressing the various methodological and governance issues, actual emission reductions and related results-based payments have hardly taken place. Recent reversals – such as the increase of deforestation in Brazil after President Bolsonaro came to power (National Institute for Space Research, INPE, 2019) – fuel further scepticism about the instrument’s effectiveness, including the possibilities of addressing industrial drivers and attracting private buy-in and investments.

Meanwhile, the financial architecture for REDD+ is highly fragmented, with money being provided by bi- and multilateral donors and distributed through various financial instruments (Norman and Nakhoda, 2015; Lujan and Silva-Chávez, 2018). Other than originally expected, international carbon markets have not become the main source of REDD+ finance. Therefore, funding primarily comes from official development assistance (ODA) budgets. Germany is one of the largest donors. At the multilateral level, the German government participates in several initiatives and institutions involved in financing REDD+. In 2015, Germany, Norway, and the UK (GNU) announced their intention to provide USD 5 billion between 2015 and 2020, with the goal of reaching USD 1 billion a year by 2020, supporting all phases of REDD+. Between 2009 and 2018 (financial years), Germany has contributed nearly EUR 384 million (USD 430 million)⁷ to the Forest Carbon Partnership Facility (FCPF), a World Bank scheme providing REDD+ finance through a Readiness Fund and a Carbon Fund for results-based finance (RBF) (FCPF, 2018). Partially related to REDD+ are EUR 1.5 billion pledged to the Green Climate Fund (GCF), which will be the major vehicle for REDD+ finance in the future (GCF, 2019).

At the bilateral level, Germany contributes to REDD+ through a broad portfolio of development cooperation measures in the forest sector. The Federal Ministry for Economic Cooperation and Development (Bundesministerium für Wirtschaftliche Zusammenarbeit und Entwicklung, BMZ) is actively involved in financing and implementing REDD+, mainly through KfW Development Bank (Kreditanstalt für Wiederaufbau, KfW) and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). Moreover, REDD+ is one of the thematic areas supported by the International Climate Initiative (Internationale Klimaschutzinitiative, IKI)

⁶ We use the term “measure” to refer to REDD+ initiatives, programmes, and projects at all levels. While the different terms sometimes indicate different volumes and scopes, they are not used uniformly by stakeholders. By using just one term, we intend to avoid confusion.

⁷ USD 106 million to the FCPF Readiness Fund and USD 324 million to the FCPF Carbon Fund.

established by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (Bundesministerium für Umwelt, Naturschutz und Nukleare Sicherheit, BMU). IKI is BMU's key instrument for bilateral climate finance. REDD+ measures financed through IKI are implemented by a variety of public and private actors, including GIZ and KfW as well as Winrock International, World Wide Fund for Nature (WWF), SNV Netherlands Development Organisation, FAO, and International Union for Conservation of Nature (IUCN).

There is an extensive body of literature on REDD+, spanning peer-reviewed academic literature, information provided by international organizations, and reports published by research institutions, think tanks and non-governmental organizations (NGOs). This includes studies taking stock of bi- and multilateral funding efforts for REDD+ (e.g. Norman and Nakhouda, 2015; Lee and Pistorius, 2015; Angelsen, 2017; Well and Carrapatoso, 2017; Lujan and Silva-Chávez, 2018). Furthermore, there is an increasing number of studies assessing the overall performance of REDD+ as well as key lessons learnt (e.g. Angelsen, 2009; Angelsen et al., 2012; Corbera and Schroeder, 2011; Gupta, 2012; Lederer, 2012; Angelsen et al., 2018b; Duchelle et al., 2019; Arts et al., 2019). Another strand of literature comprises studies analysing and comparing the progress of REDD+ in specific countries or jurisdictions (e.g. Aquino and Guay, 2013; Brockhaus et al., 2015; Ravikumar et al., 2015; CIFOR, 2019; Korhonen-Kurki et al., 2019; den Besten et al., 2019; Samndong and Vatn, 2019). Finally, there are several publications that evaluate the impact of specific REDD+ initiatives such as UN-REDD (FAO, 2014) or the investigation of Norway's International Climate and Forest Initiative (NICFI) prepared by Norway's Office of the Auditor General (Office of the Auditor General, 2018).

Apart from that, some observers criticize not only the weak performance of REDD+ in practice, but also its conceptual and ideological basis, often with reference to a narrative of illegitimate "monetization of nature" (e.g. Kill, 2015; Fatheuer, 2016; Lovera-Bilderbeek, 2017). In a similar vein, NGOs like the Forest Peoples Programme (FPP) and Friends of the Earth International (FoEI) have repeatedly reported that REDD+ interventions have violated the (social, cultural, tenure) rights of Indigenous Peoples (FPP, 2011; FoEI, 2017).

What is missing so far is a systematic examination of the performance and impact of concrete REDD+ measures that were both financed and implemented by German actors. Recent work by Pistorius and Kiff (2014) has analysed the German politics of and discourses in REDD+ finance at a meta-analytical level, with case studies at country level. By contrast, a systematic analysis of the performance of a multitude of individual measures implemented by countries with German support remains a research and evaluation gap.

Against this background, the German Institute for Development Evaluation (Deutsches Evaluierungsinstitut der Entwicklungszusammenarbeit, DEval) has commissioned a synthesis study on Germany's contribution to REDD+, in order to provide evidence to existing knowledge about the performance and impact of German REDD+ measures on the ground. This synthesis is the first inter-ministerial study by DEval that encompasses measures commissioned by three different Federal Ministries: BMZ, BMU, and the Federal Ministry of Food and Agriculture (Bundesministerium für Ernährung und Landwirtschaft, BMEL). This study was prepared by Perspectives Climate Research gGmbH (Perspectives) between May 2019 and June 2020 and was presented to stakeholders within DEval's Reference Group process.

1.2. Purpose, objectives, and scope

The key objectives of this study can be summarized as follows:

- Provide evidence-based insights into the results and impact of REDD+ measures that have been designed, financed, and implemented by or on behalf of German actors.
- Promote the exchange of knowledge, results, and lessons learnt between actors involved in Germany's contribution to REDD+ and international forest politics in general; this includes BMZ, BMU, BMEL, and other relevant stakeholders.
- Formulate conclusions and discuss the future design and implementation of REDD+ measures supported by Germany – both bilateral and multilateral.

In terms of scope, we consider measures that have taken place between 2008 and 2018.⁸ 2008 is generally viewed as the starting year of REDD+. After REDD+ was integrated into the Bali Action Plan in December 2007, developing countries started to initiate their first national REDD+ activities (Duchelle et al., 2019). In parallel, donors gradually began to pledge and disburse funding, with several multilateral efforts – such as the FCPF Readiness Fund and UN-REDD Programme (UN-REDD) being launched in 2008. In the same year, BMZ began to finance development measures with REDD+ as the core objective, and BMU started to support REDD+ capacity building through the newly established IKI (BMZ, 2015; Pistorius and Kiff, 2014). Apart from that, we focus on German REDD+ efforts that were completed before 2019, assuming that the outputs and outcomes of a measure cannot be fully assessed while it is still running.

⁸ The focus of the analysis mainly was on measures ending in 2018 or earlier. Two measures that ended in early 2019 were also included in the sample to improve the geographic balance.

2. METHODOLOGY

2.1. Data sources

This study builds on primary as well as secondary data on German REDD+ measures and REDD+ in general. First, we considered the reporting of implementing organizations. In particular, this includes proposals, and both interim and final reports that implementing organizations prepared for the commissioning entities BMZ, BMU and BMEL. The data on BMZ measures was provided directly by GIZ and KfW. The data for measures financed by BMU was provided by Zukunft – Umwelt – Gesellschaft (ZUG) gGmbH, which is in charge of managing the International Climate Initiative (IKI).

Second, we conducted 35 semi-structured interviews with a total of 39 persons (see Table 10 in Annex). The interviewees can be categorized into three different groups:

- a. Actors involved in the design, funding, and implementation of German REDD+ measures:
 - Representatives of BMZ, BMU, and BMEL;
 - Representatives of GIZ, KfW, and other organizations that have implemented measures financed through IKI;
 - National stakeholders in partner countries.
- b. Actors involved in the design, funding, and implementation of measures by other donors and initiatives (bi- and multilateral), as well as representatives of intergovernmental organizations working on forestry issues.
- c. Academic experts as well as representatives of NGOs, think tanks, and networks working on REDD+.

The interviews took place between September 2019 and February 2020, and were conducted via telephone, video conference, or in person. The conversations lasted between 45 and 90 minutes. The interviewees were informed beforehand about the purpose and objectives of the study and that all interviews would be pseudonymized. The data gained through the interviews filled information gaps and provided a deeper understanding of certain issues and procedures.

Third, we considered secondary literature on REDD+ and German measures in particular. This included peer-reviewed academic literature, reports published by international organizations, and reports published by research institutions, think tanks, and NGOs. When considering non-peer-reviewed sources, we referred to IPCC guidelines. These included the credibility of the publishing institutions and the verification of data through triangulation. Overall, only a few of the measures, like the conflictual Harapan project in Indonesia, have been investigated in focused scientific analyses. Numerous measures don't have even a single reference in the literature beyond project reports by the implementing organization. Very often, German measures are not explicitly elaborated on in analyses of the overall REDD+ development in a country, which hampers the possibility of differentiating the German contribution from the engagement of other donors and thus of attributing the insights and results to the specific German measures. Where possible, the insights from primary data and interviews are further assessed in terms of plausibility against the existing evidence in literature. Furthermore, it must be noted that due to the limited resources, the data gathering did not include field work. This limited the possibility of the authors validating the data and reported issues or successes on the ground.

2.2. Case selection

In the absence of an official list – or some other form of registry – of German REDD+ measures, we took several steps to get an overview of the actual scope of German efforts. As development measures financed by BMZ are mostly implemented by GIZ and KfW, we first searched the GIZ homepage. As of July 2019, the search term “REDD” (all file types) delivered 110 hits, which corresponded to 30 measures related directly to REDD+. This list was then cross-checked with information directly provided by GIZ. Likewise, an overview of 18 measures implemented by KfW was directly provided to the project team by KfW. BMEL was involved in one explicit REDD+ measure, which was added to the sample as well. Meanwhile, the IKI homepage features a database where measures can be searched and filtered by topic, country, and duration.

In October 2019 – when the inclusion of measures financed via IKI was confirmed – a total of 157 measures were listed under the topic “natural carbon sinks/REDD+”, 101 of which had been completed at that time. Considering the limited time and resources available for this study, only a sample of the German-funded REDD+ measures could be analysed. Based on the following criteria, we selected 30 measures in total (see Table 11 in Annex):

- **Criterion A: Correspondence to UNFCCC understanding of REDD+.** Germany has been a major donor of development cooperation in the forest sector since the early 1990s, with forests being a priority area of German ODA long before they reached the international climate agenda. Many German development efforts in the forest sector are, even today, not limited to REDD+, but take various forms. In line with the study purpose, we prioritized measures whose objectives and activities correspond directly with the UNFCCC’s understanding of REDD+ (see Section 3).
- **Criterion B: Status.** We assumed that meaningful insights can be expected from the analysis of measures that have been finalized before or in 2018. For a synthesis study without its own field work, as in the case of this one, project reports and external evaluations, which are typically only available after project termination, are indispensable. To allow for geographic balance, we included two measures that have only been completed in 2019, assuming that their advanced state at least allows for some preliminary findings. Moreover, some ongoing measures with several phases – such as REDD Early Movers (REM) and the Amazon Fund – have been included, due to their uniqueness and significance for the REDD+ process.
- **Criterion C: Focus and key activities.** Given that the analysis was directed towards REDD+ activities implemented on the ground, we excluded measures that only provide funding for (global) reports or studies as well as measures that focus on international expertise or networking opportunities.
- **Criterion D: Budget.** We excluded REDD+ measures with a funding volume below EUR 750,000, as they were often restricted to the elaboration of a single study or the implementation of singular workshops. While we acknowledge that such activities can also offer interesting insights, we still assume that, with regard to the purpose of this study, activities at medium and large scale will generate clearer results.

The focus on 30 out of more than 100 measures clearly limits the ability to generalize from the results. It is therefore important that this synthesis study is understood as an initial stocktaking of German REDD+ effort. Rather than providing an evaluation, the study’s contribution lies in shedding a first light on the details of an assorted set of case studies built on an already existing, yet scattered, body of knowledge. Targeted at elaborating key lessons and insights about how REDD+ implementation in partner countries performs concretely, we will highlight, rather than systematically analyse, the recurring issues mentioned by key stakeholders and that should be addressed in the future.

2.3. Criteria for data analysis

The data analysis builds on the evaluation guidelines and five established criteria for evaluating development assistance by the Organisation for Economic Co-operation and Development’s (OECD) Development Assistance Committee (DAC) (OECD DAC, 1991, 2002; BMZ, 2006). For each criterion, a specific set of questions has been developed, taking into account the expectations as defined in the ToCs for REDD+ (see Section 3). The definition of each criterion as well as key aspects to be analysed are presented in Table 1. The list of questions used to operationalize each criterion is presented in Table 12 (Annex).

Table 1 Analysis criteria

Criterion	Definition	Key question	Aspects
Relevance	Extent to which the design and objectives of a given measure are in line with the needs of the target group, the priorities and policies of the recipient, the priorities and policies of the donor, and the international development agenda	To what extent has the measure been relevant?	<ul style="list-style-type: none"> a. International agenda b. Further development of REDD+ c. National needs and priorities d. Relationship with REDD+ measures financed and implemented by other entities (German or non-German) in partner countries e. German priorities and strategies
Effectiveness	Extent to which the outputs generated by a given measure contribute – or can be expected to contribute – to achieving the outcomes (defined in the ToC)	What outputs have been generated and what is their contribution – or expected contribution – to achieving the outcomes (defined in the ToC)?	<ul style="list-style-type: none"> a. Contribution to outcomes b. Outputs achieved c. Factors influencing the (non-)achievement of outputs d. Acceptance and legitimacy e. Political steering f. Co-benefits g. Safeguards h. Unintended consequences
Efficiency	Adequacy of resources (qualitative and quantitative outputs in relation to inputs)	To what extent has the implementation of the measure been efficient?	<ul style="list-style-type: none"> a. Costs and timeliness of outputs b. Input output ratio c. Input output ratio in terms of avoided emissions
Sustainability	Extent to which results are likely to continue after funding has ended	How likely is it that outputs generated through the measure can be sustained after German support has ended and thus continue to contribute to achieving the outcomes (defined in the ToC)?	<ul style="list-style-type: none"> a. Financial resources b. Human and institutional capacities as well as institutional structures c. Ownership and willingness of partner countries d. Integration into other development and climate measures e. Climate proofing f. Permanence and leakage
Overarching (development) impact	Positive and negative changes – actual and potential, direct or indirect, intended or unintended – produced by the measure	What are the actual and potential, positive and negative, intended and unintended overarching effects of the measure, both in terms of the sustainability of the forest cover and emission reductions as well as regarding general land-use planning?	

2.4. Data analysis

Based on the analytical criteria and questions presented above, we conducted a qualitative content analysis that first considered the proposals as well as the interim and final reports of the 30 selected measures. The non-public reports were provided by the respective organizations (GIZ, KfW, BMEL, BMZ, BMU). More specifically, we created case profiles – i.e., documents in table format – for all 30 measures. The tables were structured according to the five OECD DAC criteria, with subsections for the corresponding sub-questions. We completed the tables in parallel with reading through the documents. For measures commissioned by BMZ, the final reports were usually structured along the OECD DAC criteria. The final reports of IKI-funded measures had no common structure, which is why we looked for key words as well as information (potentially) related to the five criteria and sub-questions. In order to compare the data, we created an overview spreadsheet (serving as a data matrix), which again was structured according to the analysis criteria and sub-questions. The insights gathered for each case were then copied into this overview. This way, we were able to identify general patterns of German REDD+ efforts, as well as key issues and challenges related to each OECD DAC criterion and sub-question.

In a second step, we analysed the interview material. The information provided on specific REDD+ measures was added to the corresponding case profiles, the overview document and the draft sections, always marked as “interview data” as compared to “primary data”. The information that was not related to specific REDD+ measures was fed into the draft sections, again marked as interview data. Qualitative data analysis was done manually within text documents and spreadsheets for aggregation. This process built on pre-selecting, clustering, and referencing relevant interview content around each specified analytical category (e.g. relevance). This way, recurring commonalities and differences in perspectives across interviews could be identified.

Finally, we reviewed the secondary literature, gathering additional information on the issues and challenges discussed in the sections. As mentioned above, however, most German REDD+ measures don’t have a reference in the literature and are not explicitly elaborated on in analyses of the overall REDD+ development in a country. However, we considered studies that enabled the primary data and interview insights to be put into perspective.

2.5. Case studies

Based on the insights generated through the analysis, we selected five measures to be presented in more detail. Specifically, we displayed the concrete activities, outputs, and additional relevant information relating to the analysis criteria. The aim of the case studies is to allow readers to get a closer look at the design and performance of an individual REDD+ measure so as to gain a better understanding of how the implementation of REDD+ works in practice. We would like to emphasize that it is not possible to generalize experiences made within these measures to the German contribution to REDD+ in particular.

We selected the five cases for two reasons. First, we were able to conduct interviews with actors involved in the implementation of these measures, which means that we have a second source other than the primary data and were able to clarify certain points. Second, the five measures illustrate different issues which, in our view, are of particular relevance to further discussions on German REDD+ measures.

- *REM Acre (Phase I)* was selected as the first REM component that has been fully implemented and concluded. Apart from that, REM was highlighted by several interviewees as an insightful proof of concept that has played an important role in further developing (non-market) RBP schemes and REDD+ in general.
- *Reduction of Greenhouse Gases from Deforestation and Forest Degradation (REDD) in Central America and the Dominican Republic* was selected because it illustrates the specific issues and challenges that regional measures (may) face, in particular with regard to harmonization and coordination.

- *Protection of Forests and the Climate (REDD+) Colombia* was selected due to the difficult framework conditions – including armed conflicts – under which the measure has taken place. As such, it highlights one of the challenges frequently mentioned with regard to limited output achievements and unclear sustainability.
- *Climate-related Modernization of National Forest Policy and Piloting REDD Measures in the Philippines* is one of the measures financed via IKI. It was selected as one of the few measures with quantified emission-reductions targets and achievements. In addition, it put more emphasis on public relations work than other measures relevant to the legitimacy and sustainability of measures.
- *Piloting Nested REDD+ Accounting in Colombia* was selected because it was implemented by an international NGO rather than GIZ or KfW. Apart from that, the measure provides some valuable insights on the role of changing political interests as well as lacking access to national decision-makers.

3. CONTEXT

3.1. From RED to REDD+: how forests (re-)entered the international climate stage

Approaches to avoiding deforestation were discussed as long ago as the United Nations Conference on Environment and Development (UNCED) – also known as the Rio Earth Summit – in 1992. However, no agreement could be reached at the Rio Summit, and the international community has not since been able to agree on a forest convention. As a result, the three Rio conventions – UNFCCC, Convention on Biological Diversity (CBD) and Convention to Combat Desertification (CCD) – all deal with deforestation within their own mandate and thus from different perspectives (Pistorius, 2012).

Under the UNFCCC, loss of forests is framed as a climate-change mitigation issue. In its third session in Kyoto in 1997, the Conference of the Parties to the UNFCCC (COP) adopted the Kyoto Protocol (KP), which allows for afforestation and reforestation (A/R) projects to generate credits under the Clean Development Mechanism (CDM). However, measures targeted at avoiding deforestation were ruled out for both political and technical reasons (Pistorius, 2012). At COP9 (2003) in Milan, Brazilian scientists presented their concept of “compensated reduction” as a means to reduce emissions from deforestation and facilitate participation of developing countries in the climate-change regime (Santilli et al., 2005). Building on the Brazilian concept, the Coalition for Rainforest Nations proposed a compensation mechanism labelled “reducing emissions from deforestation” (RED) at COP11 in Montreal in 2005 (Pistorius, 2012). At COP 13 in Bali in 2007, RED became REDD as Parties decided to include forest degradation. More concretely, the Bali Action Plan states that enhanced action on mitigation should include policy approaches and positive incentives on issues “relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries” (UNFCCC, 2007, p. 3). Two years later, at COP15 in Copenhagen, the three “plus” activities – “and the role of conservation, sustainable management of forests, enhancement of forest carbon stocks” – were officially added, with the aim of offering positive incentives for carbon removals (Pistorius, 2012; Lee et al., 2018).

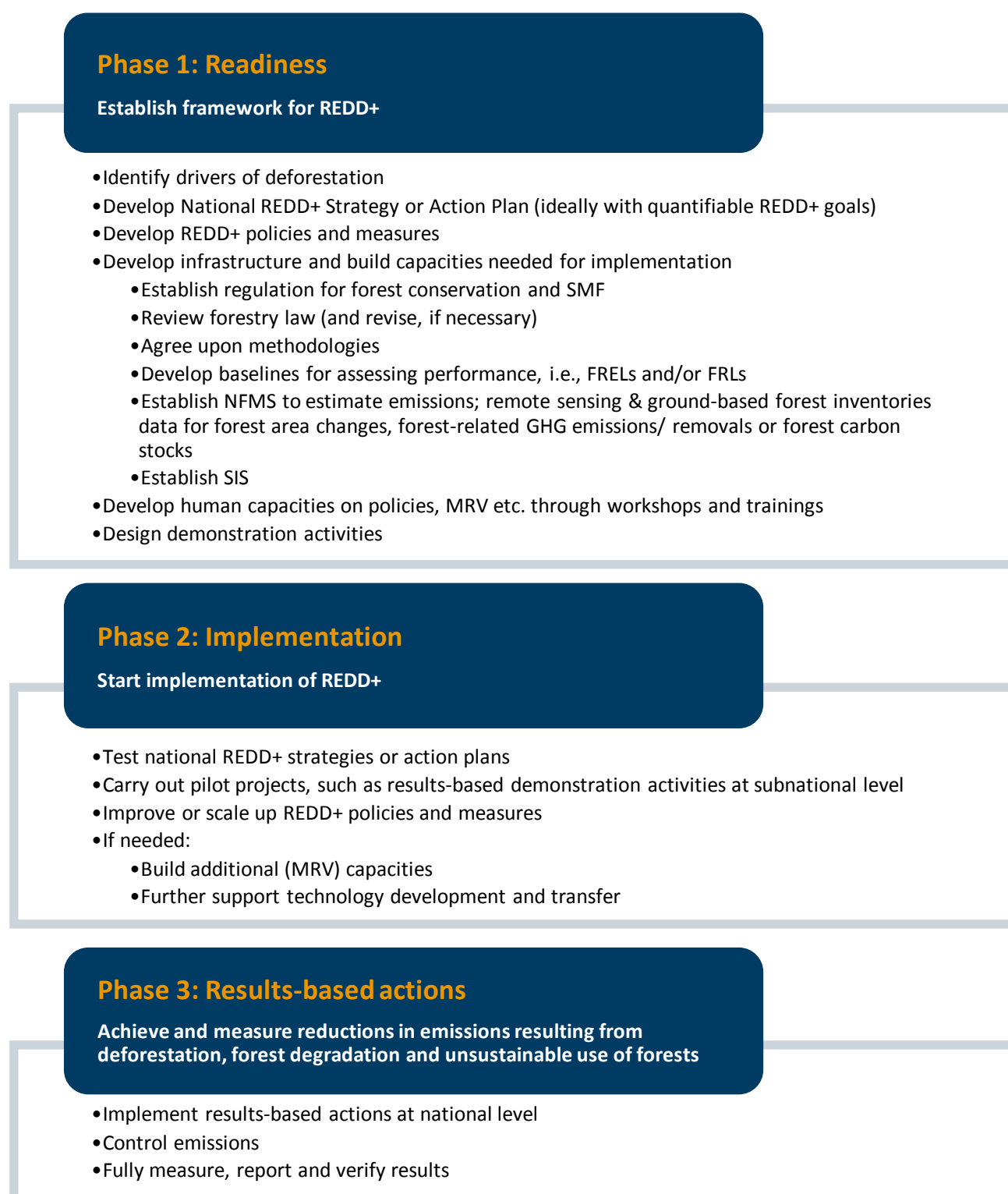
At COP16 in Cancun in 2010, the REDD+ framework was eventually set as part of the Cancun Agreements. Key elements established by the Cancun Agreements are:

- **Five activities** developing countries are encouraged to undertake in order to contribute to mitigation actions in the forest sector: reducing emissions from deforestation, reducing emissions from forest degradation, conservation of forest carbon stocks, sustainable management of forests, enhancement of forest carbon stocks (= REDD+ activities) (UNFCCC, 2010, paragraph 70).
- **Four elements** to be developed by developing countries aiming to undertake REDD+ activities: a National REDD+ Strategy or Action Plan, a Forest Reference Emissions Level (FREL) and/or Forest Reference Level (FRL), a National Forest Monitoring System (NFMS) as well as a Safeguards Information System (SIS) (UNFCCC, 2010, paragraph 71); the development of these elements requires the “provision of adequate and predictable support, including financial resources and technical and technological support to developing country Parties” (UNFCCC, 2010, paragraph 71).
- **Three phases** in which REDD+ activities should be implemented: development of national strategies or action plans, policies, measures, and capacity building (phase 1); implementation of national policies and measures (which can involve further capacity building, technology development, and transfer and results-based demonstration activities) (phase 2); results-based actions that are fully measured, reported, and verified (phase 3) (UNFCCC, 2010, paragraph 73). The focus on verifiable results in the third phase distinguishes REDD+ notably from earlier forest conservation efforts.
- **Seven safeguards** – commonly referred to as the Cancun safeguards – that should be promoted and supported when implementing REDD+ activities: consistence with national and international priorities, transparent governance, respect for the rights of Indigenous Peoples and local communities, effective participation of relevant stakeholders, conservation of biological diversity, addressing risks of reversals, reduction of displacement of emissions (UNFCCC 2010, paragraph 72; appendix I, paragraph 2).

The Cancun safeguards are seen as “critical to achieving effective, efficient and equitable social and environmental outcomes” (Jagger et al., 2012, p. 302). Meanwhile, the three-phased approach was adopted to do justice to country-specific contexts and retain flexibility (Voigt and Ferreira, 2015). For instance, the choice of the starting phase “depends on the specific national circumstances, capacities and capabilities of each developing country Party and the level of support received” (UNFCCC, 2010, paragraph 74). In addition, the focus on three phases highlights that REDD+ is a non-linear approach. There are no specific requirements in terms of when and in which order the phases should be reached or completed. In reality, the phases often overlap, in particular phases 1 and 2. The overall goals and common activities of the different phases are summarized in Figure 1.

Apart from the specific elements, the Cancun Agreements also brought up the role of carbon markets for forest-related mitigation action, and requested the UNFCCC secretariat “to organize workshops to clarify the assumptions and the conditions related to the attainment of these targets, including the use of carbon credits from the market-based mechanisms and land use, land-use change and forestry activities, and options and ways to increase their level of ambition” (UNFCCC, 2010, section A, paragraph 38).

The initial expectation was that REDD+ will lead to “a rapid, cheap and lasting reduction of emissions from tropical deforestation and forest degradation” (Angelsen et al., 2018c, p. 204). There was an overall positive resonance, also from civil society (Davis and Daviet, 2010). Even NGOs that “had been campaigning passionately against the inclusion of avoided deforestation in the CDM were not squarely opposed to the proposal to [REDD+] when it was originally introduced” (Lovera-Bilderbeek, 2017, p. 40). From the very beginning, Parties also pointed to the role of non-carbon benefits, framing RED/REDD/REDD+ as a “win-win-win policy” that contributes to climate mitigation, improved livelihoods and biodiversity conservation (Pistorius, 2012).

Figure 1 Three phases of REDD+

Source: Authors, based on UNFCCC, n.d.; UNFCCC, 2010; European Union REDD Facility, 2014; UNDP, 2016

3.2. How REDD+ has evolved over the last decade

At COP 19 in Warsaw in 2013, several decisions – summarized as the Warsaw Framework for REDD+ – were taken to provide high-level guidance on methodological, institutional, and funding aspects (UNFCCC, 2013). The elements covered by the Warsaw Framework for REDD+ are:

- Work programme on results-based finance (decision 9/CP.19)
- Coordination of support for the implementation of activities, including institutional arrangements (decision 10/CP.19)
- Modalities for national forest monitoring systems (decision 11/CP.19)
- Timing and the frequency of presentations of the summary of information on how safeguards are being addressed and respected (decision 12/CP.19)
- Guidelines and procedures for the technical assessment of submissions on proposed forest reference emission levels and/or forest reference levels (decision 13/CP.19)
- Modalities for measuring, reporting, and verifying (decision 14/CP.19)
- Addressing the drivers of deforestation and forest degradation (decision 15/CP.19).

In parallel, however, the initial enthusiasm started to decline, *inter alia*, because the “difficult realities of REDD+ programme delivery [became] apparent” (Norman and Nakhooda, 2015, p. 2). At COP21 (2015), the political momentum was renewed, with REDD+ activities being enshrined in Article 5 of the Paris Agreement and thus being recognized as core elements of the future climate-change regime (UNFCCC, 2015). In the meantime, 55 countries have included REDD+ into their Nationally Determined Contributions (NDCs) (Thuy et al., 2018).

One of the key issues surrounding REDD+ is the source of finance. The original intention was to establish a dual-funding approach, with public sources providing short-term funding for capacity building (phase 1 and phase 2) and long-term funding for results-based actions (phase 3) coming from international carbon markets (Angelsen and McNeill, 2012). Yet, as international carbon markets have not covered REDD+ to date, activities in all three phases are primarily funded by public sources, usually as a form of ODA (Lee and Pistorius, 2015; Norman and Nakhooda, 2015). This development has been referred to as the “aid-ification of REDD+” (Seymour and Angelsen, 2012). Thus, it is important to note that, despite some market activities taking place in voluntary carbon markets, REDD+ has not generally become a forestry offsetting mechanism. This development may also be seen in the context of some countries expressing their objection to REDD+ becoming a market instrument (e.g. Brazil). Notwithstanding, in voluntary carbon markets, credits from so-called certified REDD+ activities have been purchased in low volumes by private-sector actors, who often use such credits to demonstrate their corporate social responsibility (CSR) (Lujan and Silva-Chávez, 2018). Prominent private actors in voluntary markets are (impact) investors – including Althelia or Terra Global Capital – and certification schemes, such as Verra (formerly Verified Carbon Standard, VCS), which is also eligible under UNFCCC for verifying emission reductions. This way, at least the technical preconditions are set for integrating both REDD+ realms under the UNFCCC in the future (most likely as part of Article 6, Sustainable Development Mechanism).

At COP25 in Madrid in 2019, countries once again debated whether REDD+ should be covered under Article 6 mechanisms – i.e., new international market mechanisms – or not. However, no agreement could be reached, with Brazil being the most prominent opponent. According to observers, Brazil’s opposition is rooted in the government’s unwillingness to accept a higher degree of scrutiny and accountability, which would be required if REDD+ is integrated into Article 6. In addition, numerous NGOs involved in implementing REDD+ and benefit-sharing are genuinely critical of the commodification of forests (Catanoso, 2019). In addition, an ODA-based RBP scheme with fixed prices ensures price stability and, hence, predictability of future finance for both investors and recipients, which are key to an incentive-based instrument. This is preferable for many countries and donors in comparison to the price volatility in markets, as it reduces the risks for up-front investments in implementation (Interview 8).

Apart from the significant share of ODA budgets, the REDD+ finance architecture is characterized by numerous and varied bi- and multilateral funding arrangements. For phases 1 and 2, funding is provided mainly by the FCPF Readiness Fund, the UN-REDD Programme, the Global Environment Facility (GEF), the Forest Investment Programme (FIP), the Congo Basin Forest Fund (CBFF), the Central African Forest Initiative (CAFI), and through bilateral support from Norway, Germany, UK, Japan (mainly through Japan International Cooperation Agency, JICA), and the United States (mainly through United States Agency for International Development, USAID). For phase 3, the FCPF Carbon Fund, the Green Climate Fund (GCF), the World Bank's BioCarbon Fund Initiative for Sustainable Forest Landscapes (ISFL), the Amazon Fund, and the REM Programme are key multilateral sources for RBP, while Germany and Norway also provide RBF bilaterally. As mentioned above, private sector finance is channelled primarily through voluntary carbon markets. Of the multilateral initiatives, Germany contributes to the Amazon Fund, FCPF, BioCarbon Fund ISFL, GEF, GCF, CBFF, and CAFI (Lujan and Silva-Chávez, 2018; European Union REDD Facility, n.d.).

According to Angelsen and McNeill (2012), the changing financial realities are not the only shift that characterized REDD+ over the last decade. On the one hand, REDD+ evolved from having a single focus on carbon to being linked to a multitude of expectations and objectives regarding livelihoods, poverty, biodiversity, adaptation, and indigenous rights, as well as good governance. On the other hand, the policy approach has changed from the idea of establishing a multi-level system for payments for environmental services (PES) (in the case of REDD+ for carbon sequestered or not emitted) to implementing broader national policies that also include command and control regulation (see also Angelsen, 2017) and which underpin the transformational change in the sector.

Accordingly, perspectives on performance and impact have changed quite significantly over the years. It is widely agreed that initial expectations have not been fulfilled, since REDD+ has so far not been able to catalyse significant emission reductions in the forest sector (Arts et al., 2019). Most countries are still getting ready for REDD+. For instance, as of December 2019, 15 countries have submitted a National REDD+ Strategy to the UNFCCC (UNFCCC, 2019a) and 40 countries have submitted a proposed FREL and/or FRL (UNFCCC, 2019b). Both elements are key requirements to eventually receive RBP. At the same time, though, it is argued that REDD+ – even in those early phases – has promoted several dynamics relevant to the conservation and restoration of tropical forests even in the absence of RBPs. Most notably, REDD+ had improved forest governance in many countries (Angelsen et al., 2018a). Against this background, one might argue that the underlying assumptions about how REDD+ works require a shift toward a more holistic and integrated approach to the matter, including elements that helped counter powerful drivers at various scales as a prerequisite to emission reductions in forests, for example. On the contrary, one could also describe this shift as a “downward adjustment of expectations” which constructs supposedly positive effects vis-à-vis the limited performative power of the instrument and dilutes the broader goal of halting deforestation.

3.3. Shifting theories of change for REDD+ over time

In a study concerned with the analysis of performance of an instrument, the Theory of Change (ToC) that activities are built on provides the analyst with the discursive context relevant to a better understanding of the actual practices under investigation. A ToC is an analytical tool for evaluating any form of intervention (e.g. an event, initiative, programme, project, policy, strategy, or organization) (Rogers, 2014). The underlying idea is that every intervention is based on “explicit or implicit theories about how and why [it] will work” (Weiss, 1995, p. 66). As such, a ToC can be understood as “a way to describe the set of assumptions that explain both the mini-steps that lead to the long-term goal of interest and the connections between (...) activities and outcomes that occur at each step of the way” (Anderson, 2004, p. 2). This also means that it always reflects the expectations and assumptions of actors involved in the process. Usually, a ToC comprises four elements:

- **Inputs:** Financial, human, and technical resources provided and activities carried out with the intention of generating certain outputs.
- **Outputs:** Direct and intermediate results generated through resources and activities; the form and scope of the results can vary significantly from one intervention to another.
- **Outcomes:** Short- and medium-term changes that either result from or can be associated with outputs; changes can take place in various fields – political, institutional, ecological, economic, social, and behavioural – and at all levels, depending on the intentions and expectations linked to the intervention.
- **Impact:** Long-term changes at broad scale that either result from or can be associated with outcomes; changes can take place in various fields – political, institutional, ecological, economic, social, and behavioural – and at all levels, depending on the intentions and expectations linked to the intervention.

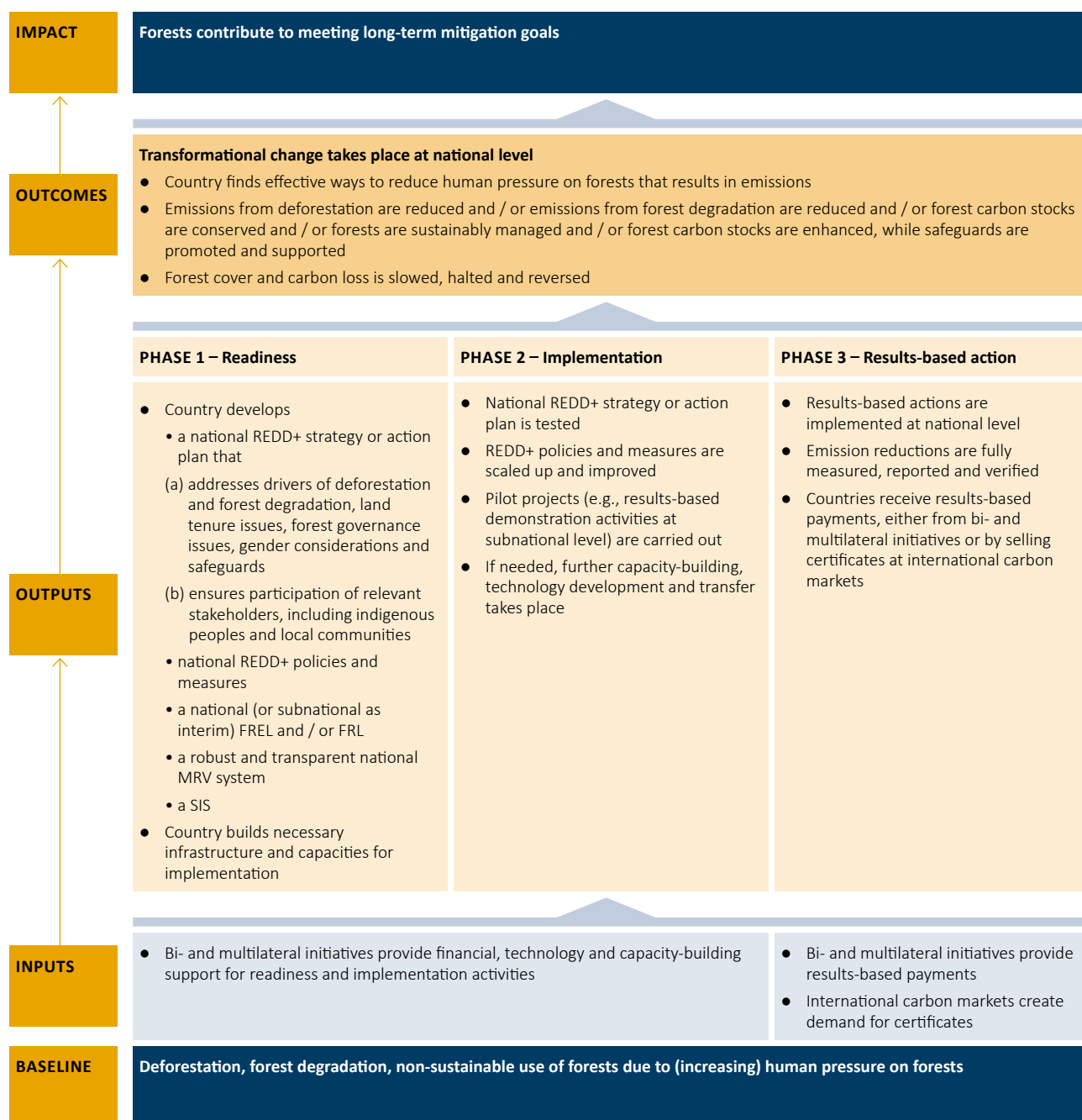
Since this study is not an evaluation, the ToC is not used as the primary analytical tool. The data available for our analysis has not been sufficient to validly assess the degree to which steps between outputs and outcomes have been made in coherence with a specific ToC. Still, a more genuine understanding of the ToC behind REDD+ is a useful exercise as it reveals general discursive shifts underpinning changes in REDD+ practice. This, it seems, is a good way to reflect how REDD+ has evolved over the last decade and to contextualize the results of this analytical study.

In line with the significant changes described above, we can assume that the underlying ToC for REDD+ has shifted over time. In the following, we present two simplified ToCs, valid at different points in time, that reflect the very assumptions about how the instrument would exert its transformative power in practice. The two ToCs are based on earlier elaborations presented by Angelsen (2017) and Martius et al. (2018). While the first ToC (Figure 2) refers to the original idea of REDD+, the second (Figure 3) reflects new objectives, issues and (financial) realities that characterize the current political and academic discourse on REDD+, including that of German support for REDD+ (Pistorius and Kiff, 2014). In a way, the shift also reflects first experiences made with readiness and piloting activities and the respective lessons learnt on how (easily) the RBP instrument unfolds on the ground. These lessons highlight the role of prerequisites in governance structures at various policy levels or of considerations regarding livelihood and other drivers of deforestation within a broader socio-political and economic environment (hence shifting from climate to development).

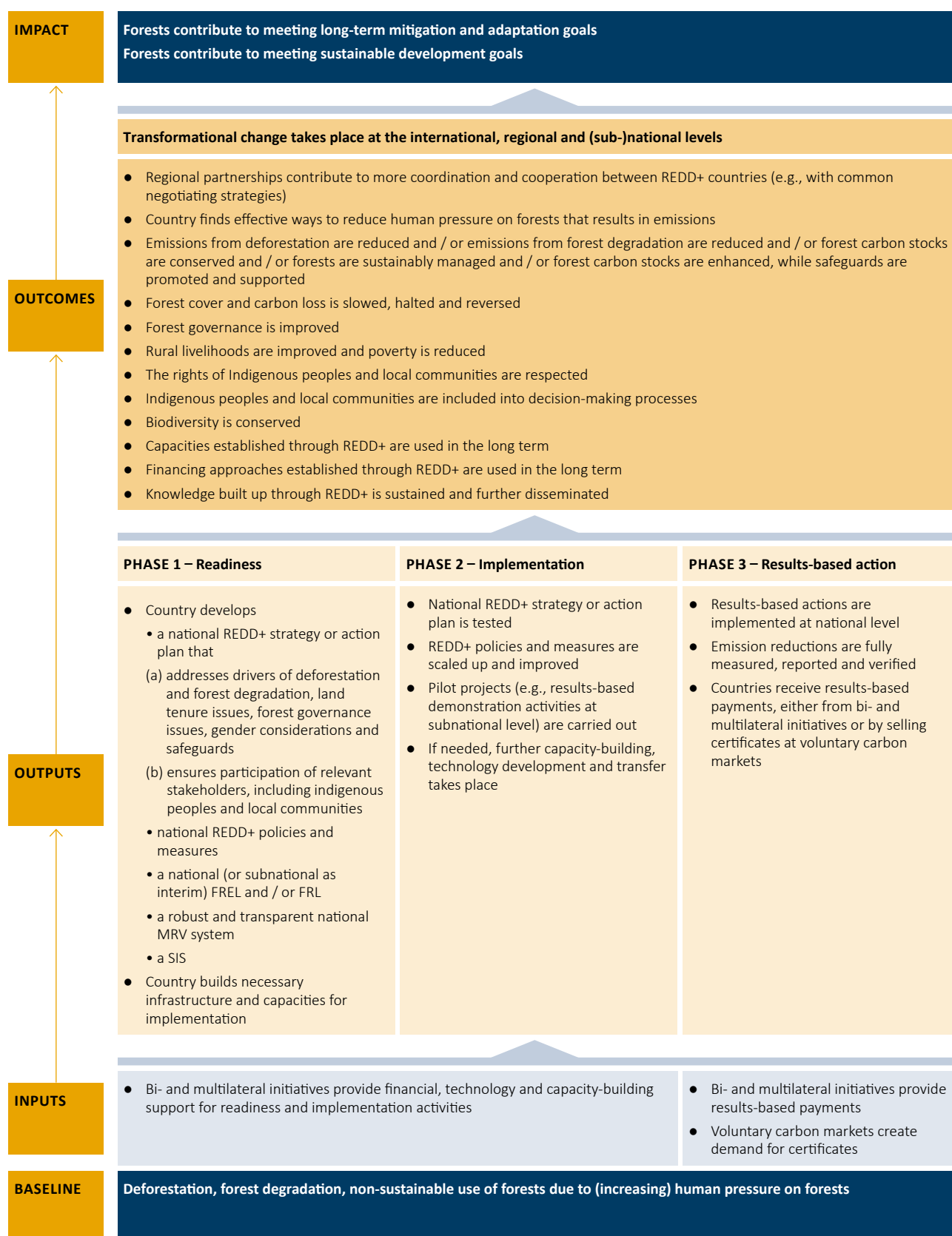
It must be noted that the inputs and outputs have not changed significantly, as the Cancun Agreements and the Warsaw Framework for REDD+ still serve as primary references for the formal design of REDD+ activities, such as safeguarding systems, reference levels, policy strategies in place, etc. However, the expectations and assumptions listed as outcomes and impacts have expanded in the second ToC. Depending on which ToC – and thus which expectations and assumptions – is taken as a basis for analysis, authors usually come to different conclusions as to whether outcomes and impacts were achieved. Against this background, the notable differences in how actors evaluate the performance of REDD+ over the last decade becomes tangible.

REDD+ has deliberately been defined as a national approach to avoid the fact that emissions are displaced (leakage). Apart from the development of national policies or technical capacities in national ministries, many REDD+ efforts – including many pilot activities implemented within German REDD+ measures – have taken place at subnational level. The subnational level still serves to further develop the approach and test specific elements. It is therefore important to note that many measures may so far only have contributed to, rather than directly resulted in, outcomes at national level. In this context, many more actors and factors beyond singular REDD+ measures supported by Germany will play a role in achieving these outcomes.

Figure 2 ToC for original idea of REDD+



Source: Authors' own figure.

Figure 3 Revised ToC for REDD+

Source: Authors' own figure.

4. GERMANY'S CONTRIBUTION TO REDD+

4.1. Main German REDD+ actors

BMZ

Germany has a long tradition of bilateral development cooperation in the forest sector. Long before REDD+ evolved under the UNFCCC, measures related to the conservation and use of forests in developing countries were financed by BMZ (Pokorny, 2015). According to two interviewees, the engagement slightly decreased in the early 2000s, mainly because of unfavourable framework conditions and unsatisfactory results (Interview 1, 12). In 2007, however, the renewed focus on forests promoted by COP13 in Bali created new momentum, both political and within the development community. Between 2008 and 2014, BMZ provided over EUR 600 million for measures with REDD+ as the core objective (BMZ, 2015). As such, REDD+ has become one of three pillars of the Ministry's forest strategy, alongside Forest Landscape Restoration (FLR) and deforestation-free supply chains (BMZ, 2015). Within BMZ, REDD+ is part of the working area of Division (*Referat*) 122 (Rural Development, Land Rights, Forests, Animal Husbandry). It is important to note that not all measures in the forest sector necessarily have a direct relation to REDD+ (Interview 1, 10, 13). At the multilateral level, BMZ is actively involved in the further development of REDD+. Notably, it represents Germany in the FCPF boards as well as in GNU (Interview 4).

BMU

While BMZ finances REDD+ measures as part of its development cooperation strategy, the engagement of BMU is focused on the original idea of REDD+ as a forest-based climate-change mitigation approach. Within BMU, the responsibility for REDD+ lies mainly with Division N II 4 (Forest Conservation and Sustainable Forest Management). Implementation builds entirely on its International Climate Initiative (IKI) which is (now) managed by Zukunft – Umwelt – Gesellschaft (ZUG) gGmbH. Within IKI, REDD+ (natural carbon sinks) is one of four thematic areas supported by grants (the other three being: mitigation, adaptation, and biodiversity). Practically, IKI has worked as a project-funding scheme since 2008. Its open thematic and country calls, including a small and medium grant scheme, allow a diverse set of international and national actors – such as academics, international NGOs, the private sector, and financial institutions – to pitch and implement new ideas on how to tackle mitigation in the forest sector. With this approach, IKI seeks to provide freedom and flexibility for thinking about and testing innovative and promising ideas and solutions around REDD+ in a competitive process, also covering new topics such as deforestation-free supply chains. Built on first experiences, the duration of measures was extended to up to eight years. In order to ensure that measures draw on existing structures in countries, GIZ denotes a key partner in many IKI projects (Interview 6).

BMEL

Of the three German ministries engaged in forest-related issues, BMEL is the one with an entire Directorate-General (*Abteilung*) focusing on forests (Directorate-General 5 – Forestry, Sustainability and Renewable Resources) and with a specific Division on European and International Forest Policy (Division 514). As such, BMEL coordinates the international forest policy of the German government, covering negotiations both within and outside the UN. The regular interdepartmental coordination (*Ressortabstimmung*) on international forest policies (mainly with BMZ and BMU) is intended to foster a coordinated and coherent cooperation between different departments and ministries. Between 2007 and 2011, BMEL was involved in funding one of the first German REDD+ efforts in Madagascar (REDD – FORECA in Madagascar), which provided a methodology for estimating the baseline biomass for different forest types and thus contributed to the preparation of a national baseline. While BMEL is still actively participating in UNFCCC negotiations on REDD+, it is no longer involved in the implementation of activities in line with the “shared responsibilities” directive of the German government. BMEL focuses its work on national and international forestry education at all levels (i.e., forest workers, forest managers and planners, forest scientists). Furthermore, it is engaged on the topics of combatting illegal logging, and on deforestation and forest degradation, with efforts to preserve global forests being directed mainly at sustainable forest management (Interview 5). It is supported in these efforts by the Federal Research Institute for Rural Areas, Forestry and Fisheries “Thünen”.

GIZ

GIZ is the key implementing organization for technical cooperation measures financed by BMZ, but, in practice, also for IKI. The specific focus lies on technical cooperation with national counterparts, which is why most of the budget covers personnel costs. GIZ hires both German and local staff, but also international consultants, who usually work in a country or region for several years (Interview 9). It is important to understand that REDD+ measures implemented by GIZ are usually targeted at the national level and at stakeholders in relevant ministries (Ministry of Environment and/or Ministry of Forests). Accordingly, there are, for instance, no REDD+ measures that aim to generate credits for voluntary carbon markets. Instead, GIZ usually advises national governments and is involved in the piloting of specific REDD+ elements at subnational level (Interviews 10, 11).

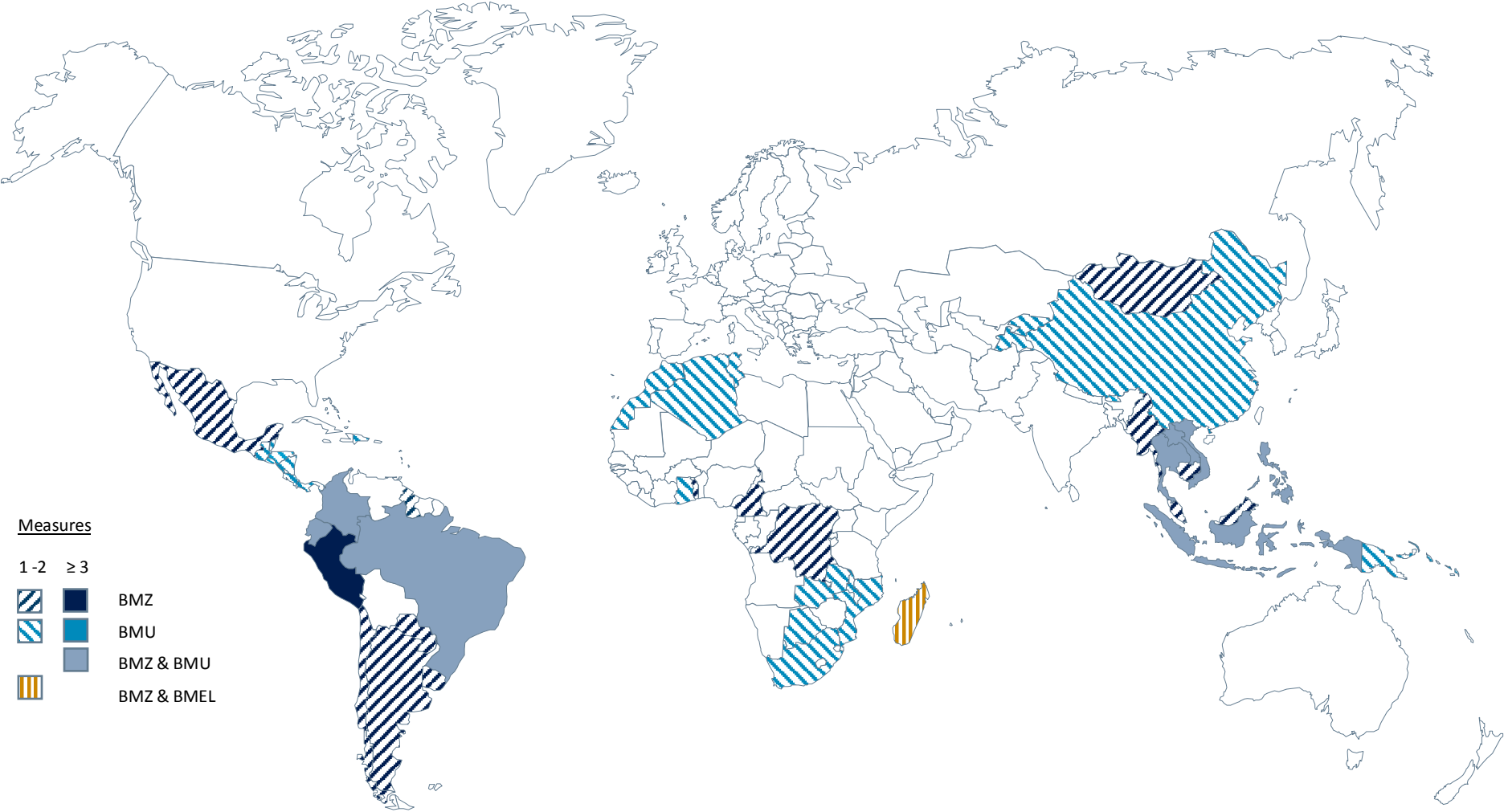
KfW

While GIZ is the lead entity for technical development cooperation, KfW is mandated to provide financial cooperation. Its involvement with REDD+ mainly, but not exclusively, revolves around REM and the Amazon Fund, i.e., activities that provide bridge funding for testing the implementation of results-based payments beyond small projects and livelihood alternatives. At the same time, KfW is financing some capacity-building activities in REDD+ phases 1 and 2. While REM is grant-based, KfW also offers credits and loans, for instance for the establishment of agroforestry systems (Interview 9). Principally, KfW operates with fewer personnel on the ground when compared to GIZ. The projects financed by KfW are implemented by national, regional, and local partners, usually from the public sector. This means that project ownership lies with partners. In line with the KfW procurement directives, partner institutions may use the project budget to hire external consultants (Interview 9).

4.2. German efforts across three phases

German REDD+ efforts are extremely diverse, practically covering all phases, elements, and issues linked to REDD+. In addition, German REDD+ measures are spread across the globe. As shown in Figure 5, the 30 measures analysed in this study cover Africa, Latin America, and Southeast Asia. Yet, it must be noted that some of the countries are only included through regional measures. At the same time, there are some REDD+ hotspots, i.e., countries where several measures – both national and regional ones, partly with different German commissioning entities – are taking place. This includes Colombia (5), Laos (5), Ecuador (4), Indonesia (4), Philippines (4), Viet Nam (4), Brazil (3), Thailand (3), and Peru (3).

Figure 4 Countries in which analysed measures have taken place



Source: Authors' own figure.

The majority of the selected measures (28 of 30) explicitly contribute to the first or second phase of REDD+, sometimes both. This ratio also reflects the general status of the development of the instrument within countries, where most countries need to be seen as not (yet) ready for REDD+. Table 2 displays the variety of activities financed by Germany with the aim of supporting partner countries in phases 1 and 2.

Table 2 Range of activities of German REDD+ measures (phase 1 and phase 2)

Category	Activities
Supporting the establishment of specific REDD+ elements (as outlined in Cancun Agreements and Warsaw Framework for REDD+)	<ul style="list-style-type: none"> Supporting the analysis of drivers of deforestation Supporting the development of National REDD+ Strategy or Action Plan as well as priority opportunities for REDD+ implementation Supporting the promotion of safeguards and development of SIS Supporting the development of FREL and/or FRL at national and/or subnational level, for instance by identifying historical baselines and providing advice on scenario developments Supporting the development of NFMS, for instance by <ul style="list-style-type: none"> developing free tools for forest monitoring providing technical equipment or expertise to establish national forest inventory supporting acquisition / processing / storage of remote sensing and inventory data developing methodological approaches to estimate carbon stock and removal potential of different forest types Advancing the understanding of forest carbon stock enhancement Supporting the integration of forest restoration and carbon enrichment into other policy areas Supporting the improvement of forest management by introducing forest management plans, structures, or units Supporting the development of restoration and forest rehabilitation strategies
Supporting the institutional set-up needed to realize REDD+	<ul style="list-style-type: none"> Improving the equipment, infrastructure, and capacities of (sub)national authorities needed for implementation of REDD+ elements (see above) Providing advice to (sub)national authorities to improve legal frameworks (e.g. forest protection legislation, recognition and enforcement of land-use rights, forest and carbon registries) Supporting the establishment and effective management of protected areas Supporting the establishment and work of national REDD+ focal points and REDD+ bodies Supporting the development of financial and benefit-sharing mechanisms Supporting the formalized involvement of local and Indigenous communities Supporting the design and implementation of pilot activities Supporting the acquisition of additional funding Supporting the capacity development of non-governmental actors by conducting workshops and training focusing on technical know-how, project management, forestry education, etc.
Building up knowledge and raising awareness (cross-cutting phases)	<ul style="list-style-type: none"> Supporting knowledge transfer by introducing knowledge management systems, disseminating best practices, establishing local expert networks, conducting new research, etc. Supporting inter-sectoral and multi-level policy dialogue through (regular) events Raising public awareness on forest conservation and climate change issues

Source: Authors, based on primary data

Despite this strong focus of German cooperation on REDD+ readiness, two measures explicitly contribute to phase 3: REM as well as the German support of the Amazon Fund.

Founded by the Brazilian government in 2008, the Amazon Fund aims to raise finance to support actions promoting the preservation and sustainable use of forests in the Amazon Biome. It is managed by the Brazilian Development Bank (Banco Nacional de Desenvolvimento Econômico e Social, BNDES). Norway was the first donor to offer financial resources, followed by Germany (through KfW) (Forstater et al., 2013). In addition, GIZ provides technical assistance to the responsible BNDES team, supports both implementing organizations and applicants, and advises evaluations of completed measures (GIZ, n.d.).

BMZ's REDD Early Movers Programme is elaborated in more detail below, to pay heed to the peculiarities of its unique RBP approach and its role as Germany's flagship initiative for activities in phase 3. Together with the case study description for REM Acre (Brazil, Section 5.1) this allows the interested reader to gain more detailed insights into its design and operation principles well beyond the analytical results provided in Section 4.3, where REM is just one among 30 measures investigated.

REDD Early Movers Programme

Established in 2011 and launched by BMZ in 2012, REM is a global development cooperation programme implemented at the national and jurisdictional level (von Pfeil, 2015). It combines carbon finance provided by KfW, with operational support from GIZ. In a nutshell, REM aims to reward pioneering countries or jurisdictions (so-called early movers) that have reduced deforestation rates on their own initiative (KfW, 2015a; KfW, n.d.). According to BMZ (n.d.), the defining features of early movers are that they:

- “have already made sufficient progress in putting in place the technical conditions and enabling policy and international environment needed for efficient forest conservation (readiness process) so that they are eligible to receive payment for reliable and permanent emission reductions” (BMZ, n.d., p. 5); or
- “have large-scale forest conservation programmes in place at subnational or national level, which have the potential to be rapidly developed into performance-based REDD programmes” (BMZ, n.d., p. 5).

Depending on the actual status of an early mover, KfW can provide incentive payments (REM-IP) or performance-based payments (REM-PP). The former refers to payments for forest conservation that are made *ex-ante* and are based on a hectare proxy. In contrast, REM-PP are made *ex-post* and upon the verification of results (i.e. emission reductions, ER) (BMZ, n.d.; Pistorius and Kiff, 2014; Climate Focus, 2015). The criteria for both REM-IP and REM-PP are listed in Table 3.

Table 3 REM criteria

Modality	Criteria
Incentive payments (REM-IP)	<ul style="list-style-type: none"> • Establishment of a national FREL or FRL • Drivers of deforestation and/or forest degradation have been identified and measures to counter them have been developed • Availability of elementary data on forest ownership • MRV system and REDD+ register are being developed • Quantifiable benefit sharing: at least 50% of funds go directly to forest owners and/or users • Participation of women in benefit sharing • Transparency of REDD+ system (regulatory and institutional conditions) • Safeguards and consultation and participation processes based on FPIC or comparable national procedures if higher standards; consistency with guiding principles of German development cooperation
Performance-based payments (REM-PP)	<ul style="list-style-type: none"> • Established FREL or FRL; system established at sub-national level is consistent with the national framework • Established national targets for combating deforestation and reducing emissions; guaranteed consistency of targets at subnational level • Existing MRV system and REDD+ register • System in place to address permanence risks • Significant own contribution in emission reduction under REDD+ (different degrees depending on the country category)

Source: Authors, based on BMZ (n.d., p. 10)

With regard to REM-PP it is important to note that the compensated ER must be registered and retired, which means they cannot be used to generate carbon credits. As such, payments under REM are not linked to carbon markets but form “part of a bilateral results-based payment agreement in the context of an official development assistance (ODA) programme” (Llopis, 2018, p. 23). In consequence, that means that, as a non-market instrument built in a multilateral funding scheme, REM does not allow the purchase of carbon credits, such as for offsetting emissions occurring in donor countries (Interview 8). This idea also underpins FCPF's Carbon Fund.

REM is intended to provide a simple and flexible approach to RBP by:

- focusing on deforestation (keeping aside forest degradation as well as the role of conservation, sustainable management of forests, and enhancement of forest carbon stocks)
- using a reference level based on historical average (8–12 years)
- using conservative estimates for carbon content of forest ecosystems
- applying a specific risk-management mechanism to mitigate risks of leakage, non-permanence, and uncertainty; in other words, a country or jurisdiction is required to contribute one additional ER for each ER compensated
- gradually improving MRV systems (BMZ, n.d.; von Pfeil, 2015; Climate Focus, 2015).

A key feature of REM is its unique approach to benefit sharing. First, at least 50% of RBF has to reach the local level, namely forest owners and/or users (e.g. Indigenous Peoples and small-scale farmers) (BMZ, n.d.). Second, the so-called stock and flow approach is intended to ensure a balanced distribution and usage of funds. The overall idea behind this approach is to incentivize “activities contributing to conservation

(maintaining or enhancing carbon 'stock') on the one hand, and activities that directly address deforestation (i.e. the 'flow' of emissions) on the other" (KfW, 2015b, p. 4).

In line with the early mover idea, partners are typically reimbursed for their own, historical, achievements in emission reductions in forests – which often occurred even before REDD+ existed as a formal framework under the UNFCCC. In this regard, REM marks an exceptional case of RBP and helps address a fairness issue that pertains between REDD+ countries by rewarding countries that would otherwise be excluded from the framework, at least regarding those past achievements (Interview 8).

Where needed, technical support for early movers is provided by GIZ. The aim of this engagement is to enable countries or jurisdictions to qualify for finance through REM. Usually, this takes the form of short-term measures (1 or 2 years) operating within a relatively small budget (around EUR 1.5 million), and explicitly targeted at specific issues the country or jurisdiction needs to improve (Interview 2). The support provided by GIZ includes the following activities:

- Strengthening of institutions
- Provision of instruments
- Creation of coordination mechanisms for comprehensive processes with interest groups
- Provision of advice, such as on gender-sensitive benefit-sharing programmes, on safeguards and their monitoring, and on the establishment and expansion of REDD registers, reference levels, and MRV systems
- Development and implementation of REDD strategies
- Involvement of additional sectors such as agriculture and livestock breeding (GIZ, 2019).

REM is currently implemented in Colombia, Ecuador, Mato Grosso (Brazil) and Acre (Brazil, see Case Study 5.1). When REM was developed, it was assumed that more countries or jurisdictions would qualify as early movers. In reality, however, it was rather difficult to find partners that fulfil the criteria mentioned in Table 3 and are thus seen as being ready to receive RBPs (Pistorius and Kill, 2014; Interview 2).

Acre was the first partner to receive RBPs for verified ER: by the end of 2016, a total of EUR 25 million was disbursed to Acre's state government (KfW, n.d.; KfW, 2017). Payments were based on a carbon price of USD 5/tCO₂e. In total, REM rewarded around 16.5% of Acre's ER for the reduction period of 2011–15. An additional 17.7% was registered and retired as a risk reserve by Acre. The emission reductions were calculated by comparing the deforestation that occurred in the period 2011–15 to the deforestation that occurred in the reference period (2001–10) (KfW, 2017).

Given that there are only few examples of RBP for REDD+ already being disbursed and received, it is still unclear what the transition from phases 1 and 2 to phase 3 could (or should) look like (Neeff et al., 2014). REM is the second RBP approach initiated by donors, following Norway's bilateral agreements with Brazil (2008), Guyana (2009), and Indonesia (2010) (Silva-Chávez et al., 2015). The REM programme has provided additional evidence of what RBP schemes can look like in practice, and is described as "an innovative way to test result-based funding in the forest sector" (Pistorius and Kiff, 2014, p. 22).

4.3. Analysis of German REDD+ measures according to key criteria

This section analyses the German REDD+ measures according to key criteria. These criteria include relevance, effectiveness, efficiency, sustainability, and overarching (development) impact.

4.3.1. Relevance

International agenda

When describing the objectives and activities in their proposals as well as interim and final reports, all analysed measures refer to issues of sustainable development and climate change, as discussed internationally. More than half of the measures report that they are aligned with the international climate agenda or with REDD+ elements, as dealt with under the UNFCCC, including safeguards, MRV and benefit sharing. A few measures explicitly state that they contribute to implementing the Paris Agreement. Other frameworks such as the SDGs, CBD, and CCD are mentioned as well.

A concern raised in our interviews was that of upholding political momentum internationally – especially more recently – for a rather complicated and still under-developed REDD+ instrument against newly arising and seemingly less complicated concepts on the international agenda, such as integrated landscapes. This holds the general risk of either clinging to uncertain policy agendas or falling for (potentially short-term) political fashion (Interview 6). Increasing financial security for the instrument internationally could counteract this tendency (Interview 6, 31). Likewise, actors may well see and highlight the thematic overlaps and mutual relevance (Interview 24). That measures are assigned to different international agendas is, of course, also a reflection of varying interests and expectations associated with REDD+ (see Section 3.3 on shifting ToCs). In this vein, some interviewees argued that the adherence to one specific agenda usually means that certain issues are prioritized over others (e.g. climate over biodiversity or rural development and livelihood concerns) (Interview 5, 27, 28).

Finally, a few interviewees pointed to the gap between theory (i.e., a rather abstract international agenda) and practice (i.e., the reality of implementing activities on the ground) (Interview 8, 12, 19, 22, 23, 28, 31). In their view, an “excessive focus” on one or more international agendas or strategies holds the risk of distracting both donors and national authorities from local realities (Interview 12, 19, 22). This was particularly obvious in the case of the Cancún Safeguards, which were operationalized quite differently by different multilateral or bilateral schemes (such as REM or FCPF). According to the interviewees, these confronted the countries, and also the (German) implementing organizations, with a complex set of requirements (Interview 8, 22, 26). While safeguards are principally seen as key to addressing pertinent risks for the environment or humans and their rights, over-sophistication in operationalization (e.g. translating into 150 abstract indicators in the case of FCPF), in their view has led to “paralysis” or inaction and a diversion from actual risks in the countries (Interview 8, 22, 23, 26). In the case of reference levels (RLs), the negotiated flexibility in setting FR(E)Ls is somewhat detrimental to the actual idea of rewarding performance (Interview 23), while RLs that are too strict undermine the fairness toward past high performers in emission reductions (Interview 8, 26). This also prompted questions of how to deal with countries with currently low deforestation rates for which there is not even a financial incentive to join REDD+ (Interview 26).

In the academic literature, the mismatch, or lack of vertical integration, at the implementation and international policy level, as well as the corresponding overlaps of systems by different supporting agencies, was repeatedly highlighted (e.g. on safeguards, Jagger et al., 2014). Such overlaps and inconsistencies within the resulting polycentric implementation reality are not really surprising, given that international agreements and respective instruments are purposefully kept rather general in detail so as to be applicable to a plethora of varied contexts (Pistorius and Reinecke, 2013, Pistorius et. al., 2011). Technically speaking, and what plagues most international regimes, it appears not so much of a problem to adhere to the rules of the Warsaw Framework or any other targets (SDGs) as such. Typically, Multilateral Environmental Agreements are either non-binding (SDGs), hardly ambitious, or are kept so vague in terminology that they leave multiple loopholes (Vogler, 2006; Andresen, 2001). The challenge (possibly also opportunity, Interview 26) in REDD+ is that with multiple bi- and multilateral actors engaged in implementing REDD+ in the countries a set of different

rulebooks are being brought into play from which a country can choose. This has helped to test different approaches to RLS, safeguards etc., and is an understandable approach for avoiding the situation where donors' and thus tax payers' money is spent on hot air. However, it appears the right time to seek more rigorous harmonization among those systems in the interest of accelerating progress. We see the current effort within the GNU partnership between Germany, Norway, and the United Kingdom – and between REM and FCPF – as critical steps in this direction (see below).

Further development of REDD+ at international level

According to the primary data, several of the analysed measures contained innovative elements. With regard to the readiness and piloting phase, this includes, for instance, the introduction of:

- New forest inventory methods (National REDD+ System for the Philippines)
- New forest governance instruments, such as contractual nature conservation (National REDD+ System for the Philippines) or ecosystem licenses (Harapan Rainforest – Pilot Restoration of a Degraded Forest Ecosystem on Sumatra)
- New tools to monitor carbon stocks (REDD – National Forest Inventory in Mongolia)
- New forest rehabilitation methods and forest management systems (Harapan Rainforest – Pilot Restoration of a Degraded Forest Ecosystem on Sumatra, Indonesia)
- New methods to specifically measure forest degradation (Development of Integrated Monitoring Systems for REDD+ in the SADC Region).

Some final reports also mention that the innovations and corresponding insights have been shared through studies and presentations at national, regional, and international meetings, thereby attracting the interest of various stakeholders, including other donors.

This was confirmed by three interviewees, who argued that German measures have had considerable impact on the further development and design of REDD+ because specific activities and outputs have been replicated by other implementing organizations (Interview 14, 15, 17). For instance, the work of developing Emission Reductions Payment Agreements (ERPAs) under the FCPF Carbon Fund was highlighted as having helped countries advancing and testing decisive elements for RBP such as reference levels (Interview 26). While the Carbon Fund was not yet able to disburse any funds to recipients (Interview 8, 22), the piloting experiences with REM were highlighted as a particularly insightful “proof of concept”, which had shown how the provision of RBP can be organized in practice (Interview 2, 3, 8, 9, 11, 23, 31). The REM programme has quite quickly convinced other donors (UK, Norway) who are supporting the programme –financially and otherwise (Interview 8, 23). Although there would be enough finance internationally, in REM Acre actually only one-third of the verified emission reductions (ERs, i.e. 16.5%, plus 17.7% risk buffer) were compensated for (Interview 8).

On a more general level, some interviewees mentioned that Germany's contribution to REDD+ is also linked to its engagement in international organizations and multilateral initiatives. On the one hand, Germany was actively involved in developing REDD+ under the UNFCCC, as well as in initiating and designing the FCPF process (Interview 4, 28). On the other hand, Germany has been able to promote its viewpoints and shape discussions on REDD+ through its close relationship with other donors. This refers in particular to the GNU Partnership with Norway and the UK, which not only allows for learning from each other's experiences but also for finding a joint position for the further development of REDD+ at international level (Interview 4, 9, 23, 35).

The results resonate with the insights in academia that practice on the ground often has repercussions for and may well shape the very course of international negotiations, and vice versa (Corbera and Schroeder, 2010; Reinecke et al., 2014). Proof of concept on the ground helps agreements to become more ambitious and precise, since high level practitioners of implementing agencies participate in negotiations and discussions, e.g. under GNU, FCPF, or UNFCCC (Reinecke et al. 2014). However, considering the experiences with international negotiations around the second commitment phase of the Kyoto Protocol (KP), it may be

unwise to re-open sections at a later point of time, since this is likely to lead to a dilution of the text (cf. for Land Use, Land-Use Change and Forestry under CP 2 of the KP, Pistorius et al., 2016).

A worrisome aspect, which also recurs in academic literature, is the need to mobilize sufficient, predictable, or sustainable, future finance (e.g. Phelps et al., 2011; Sunderlin et al., 2014; Wong et al., 2016). So far, the experience and lessons learnt with REDD+ have not led to more trust in the instrument and have led instead to a significant increase in secured finance, such as under the GCF or REM, which in essence means that an indispensable element of the instrument that is supposed to incentivize further commitment and progress in REDD+ countries remains critically underdeveloped. In fact, the financial contribution of Germany is among the highest internationally, only exceeded by Norway. Still, the question arises of whether enough is being done to attract additional finance, not only through ODA by other countries, but particularly through mobilizing or diverting finance in the private sector, which is strongly linked to the relevance to the respective actors within and beyond countries.

At the same time, however, a substantial amount of the existing funding has not yet been disbursed (for causes see, e.g. Section 4.3.2 on safeguards). For instance, the FCPF Carbon Fund has raised USD 900 million from a variety of donors – including Germany – but has not made any results-based payments to the 19 countries in its pipeline (i.e. countries that have principally achieved the FCPF's standard for REDD+ readiness already) (Lujan and Silva-Chávez, 2018). In February 2019, Mozambique and Democratic Republic of Congo were the first of the 19 countries to sign ERPA's that allow them to get payments from the Carbon Fund. According to the World Bank, "the other Carbon Fund countries are expected to sign similar deals [over the next year] which will run through 2024" (World Bank, 2019).

National needs and priorities

As of the project proposals or final reports, all measures were responsive to the country's specific needs or challenges. Half of the reports explicitly refer to a National REDD+ Strategy or Action Plan, a National Forest Strategy or Action Plan, or some sort of Action Plan for Emission Reduction, Climate, National Development, or Environment. Only a few reports establish a direct linkage to a country's NDCs or its quantitative emission reduction and/or forest conservation targets. It must be noted, though, that many countries have not (yet) formulated such concrete targets. On a different note, this observation suggests that the REDD+ process is not always fully aligned with the process of defining national mitigation strategies and targets. Yet, one must also take into account that most of the analysed measures started in the late 2000s or early 2010s and thus before NDCs were formulated.

Meanwhile, many reports mention a specific REDD+ issue that they sought to address ("country X lacks Y for planning and implementing REDD+"). The aspects commonly mentioned as weak or lacking are:

- Institutional framework to effectively implement REDD+ and RBP
- Legal requirements to effectively conserve forests
- Technical, financial, and human capacities and know-how
- High-quality forest-related data
- Clarity about responsibilities, rights, and obligations in the context of REDD+
- Consistent and suitable strategies to prevent deforestation, forest degradation, and unsustainable use of forests
- Cooperation, coordination, and trust between and/or within different stakeholder groups involved in REDD+
- Awareness of forest and climate issues.

According to our interview data, German development cooperation on REDD+ has often drawn on long-standing relationships with stakeholders in partner countries. These relationships have increased the ability of German actors to identify national needs and priorities. Several interviewees highlighted the unique role of GIZ staff who, in many countries, have been present for many years (Interview 6, 10, 12, 13, 14, 15, 35). In

countries such as Indonesia, for instance, GIZ has been engaged in capacity building measures for over 20 years, which, according to the interviewees, provides GIZ staff with specific knowledge of national circumstances and needs (Interview 2, 10). As one interviewee maintained, “there are, in fact, only a few countries like Germany that offer partner countries such a relevant ‘hands-on’ support built on technical and development cooperation” (Interview 31). However, such close relationships usually do not exist for all sorts of actors – for example, the private sector and ministries other than the Ministry of Environment (Interview 6, 22, 31, 33) – and also depend on personnel capacities (Interview 31).

Furthermore, it has often been difficult to adjust measures to changing national interests and needs, in particular when these changes were initiated by broader political or societal disruptions and changing governmental priorities. For instance, in Colombia, the peace process led to a new focus on infrastructural and economic development, while in Brazil the new presidency is actively supporting mining and ranching (Interview 2, 3, 11). In some cases, such shifts in government meant starting from “zero”, where building up renewed political commitment takes years rather than months (Interview 8). At the same time, several interviewees pointed to the need to adjust the expectations of both partner countries and donors regarding what REDD+ could possibly accomplish vis-à-vis powerful drivers and diminishing public funding. In their view, a better “expectation management” at all levels is necessary to avoid the naïve impression of simple and quick technical or financial fixes, stressing that REDD+ can only be relevant if it is embedded within a more programme-focused approach, especially on land-use governance (policy and tenure) (Interview 1, 2, 6, 9, 16, 31, 34). As can be seen in the successes in Brazil (before President Bolsonaro was elected and significantly weakened forest legislation and enforcement), legal frameworks and command and control approaches are highly important for private actors investing in land to take responsibility for the impacts of their activities and investments (Interview 32).

Moving away from small (conservation) projects at community level, the next generation of measures will have to scale up considerably, according to several interviewees, reflecting the national level idea and the critical leverage points for halting deforestation (drivers) (6, 17, 23, 31, 32, 33). This may mean moving from small-scale livelihood interventions (like supporting beekeeping in forests) to the bigger picture and the economically “heavy-weight” land-use pressures outside forests (e.g. cattle ranching, soy, oil palm) (Interview 32, 33). One interviewee maintained that critical momentum was lost for asking inconvenient questions such as who benefits from large scale deforestation, because of the “business as usual” ODA approach to REDD+ with local projects mainly involving smallholders. Likewise a “project-based” ODA approach risks reviving “old” power dynamics and terminology of dependence (“donors” vs. “recipients” (Interview 32). At the same time, local and sub-national projects may keep donors in the game, especially where there are difficult (sub)national political circumstances (e.g. lacking capacities or commitment (Interview 22).

There remain actors within countries, such as hypercritical NGOs, that REDD+ measures may hardly ever reach (ideologically), because the underlying rationale of the RBP instrument collides substantially with their belief that forests should principally not be commodified (Interview 8, 31, 33). While it is debatable whether REDD+ outside the low volumes of the voluntary carbon market or CDM (A/R) is actually a real market approach in a strict sense (Interview 8), interviewees suggest accepting that there are always actors that deliberately exclude themselves. Much more worrying about REDD+ was, however, that with a strong focus on national-level capacities, sufficient links to local level players are not always in place (Interview 33).

Apart from demonstration activities, the Amazon Fund, or REM, a number of REDD+ measures have only a minimal link with REDD+ in a narrow sense, and build on rather classical development cooperation approaches, according to some interviewees (Interview 7, 10, 31). Addressing more general issues of forest inventories, policy reform or land-use governance, German development cooperation can indeed offer partner countries a broad programmatic portfolio (Interview 6, 31). In some instances, interviewees have reported that REDD+ had also triggered an artificial “relevance” especially for local NGOs that build their business around the new finance coming from REDD readiness, such as going to workshops, while doing what they always used to do (Interview 22, 33).

When discussing REM, a number of interviewees specifically highlighted that – together with other programmes such as the BioCarbon Fund ISFL – German support has at least in part addressed the chronic lack of finance for REDD+ RBP and therefore contributed to meeting countries' expectations of credible finance for RBPs (Interview 2, 6, 9, 31).

Seeing the German approach to readiness, the conclusion, based on the data and interviews, that Germany has provided relevant support seems plausible, at least for the national level and partner ministries. While discussions of a supposed recentralization around REDD+ are not new (Thompson et al., 2011; Phelps et al., 2011), these may be less problematic seeing how REDD+ is typically implemented – top-down through national entities. The capital-city based approach, especially during the readiness phases, is not surprising and may not be taken as an indication that REDD+ measures were per se not relevant (for local people). Readiness measures (especially in phase 1) mostly focus capacity-building on national monitoring systems or governance frameworks (strategies, action plans). In fact, due to all technicalities around REDD+ (e.g. FREL, NFMS), little may be gained from consulting local people just for the sake of consulting. However, to ensure that the REDD+ implementation (phase 2+3) does not trigger conflicts over tenure or carbon benefits, which is the underlying concern in re-nationalization allegations, a useful safeguarding system and respective benefit-sharing schemes have a prominent role to play (see Section 4.3.2).

Seeing the conflicting interests in land use, the approach (not exclusively German) of mainly consulting the environmental or forestry ministries carries considerable limitations for the measures to be relevant to actors in other ministries. In this respect the shift in ToC may offer avenues for broadening the scope of activities, which also related to the pertaining impression that numerous measures are actually not REDD+ measures in a strict sense. With shifting underlying assumptions of how to achieve effectiveness in REDD+, such classical ODA interventions may become more relevant. However, limiting the activities only to certain partners and classical ODA activities, which is what German Development Cooperation is good at, may shoot past the actual target and “kill” the remaining enthusiasm for trying something new with REDD+. The integrated approach between KfW and GIZ around REM may be seen as a positive exception.

Relationship with REDD+ measures financed and implemented by other entities (German or non-German) in partner countries

The primary data analysis has shown that the coordination and cooperation between measures is a key issue for stakeholders that implement REDD+. In their final reporting, more than half of the measures explicitly refer to complementarities and synergies with other German measures. Most of them also report some form of physical coordination and cooperation, for instance through regular meetings or joint information sessions. In a few cases, German implementing organizations even shared offices or made use of contacts established through other measures.

Several interviewees confirmed that German–German coordination takes place both in Germany – in particular through regular consultations between BMU and BMZ (and BMEL in the *Ressortabstimmung* on international forest policy) and between GIZ and KfW – and in partner countries (Interview 2, 4, 6, 9). For BMU and BMZ, the German embassies are core “anchors” for coordination within countries (Interview 6). Also, BMZ and BMU build their activities on a shared implementation structure, for example with GIZ and KfW implementing measures financed by both ministries, but also using structures existing within the country. The intention behind this approach is to avoid redundancies and additional streamlining efforts (Interview 6). Both ministries have developed a distinct portfolio on REDD+ so as to delineate thematic responsibilities and activities (e.g. studies or assessments vs. technical support and implementation). Clearly, such coordination depends heavily on the personal capacities of officers (e.g. in embassies) as well as on the “cooperative” culture between the ministries. For example, a point mentioned was the temptation to appropriate or undermine an activity or theme of the sister ministry which was not always successfully implemented in the past (Interview 6). In earlier development cooperation measures, KfW and GIZ have not always worked well together. Triggered by the cooperation around the REM programme, with clear working responsibilities in the coordination with partners, the working atmosphere and partnership is described as exceptionally good nowadays (Interview 8).

When it comes to measures implemented by other donors, coordination and cooperation has proven to be more difficult and partly insufficient. First of all, it must be noted that donor coordination takes place both at the political and operational level (i.e., on the ground). According to our interviews, the GNU partnership has become the nucleus of donor coordination at a political level. Germany, Norway, and UK regularly discuss the coherence of their REDD+ finance and have formulated joint declarations of intent for specific countries, as recently for the Democratic Republic of Congo and Colombia (Interview 4, 6, 8, 9, 22, 23). It must be noted, though, that these declarations are formulated at strategic political level, which does not necessarily mean that the implementation of concrete measures on the ground is coordinated as well. Overall, the three countries increasingly try to integrate their efforts and follow the same goals while working on rather complementary portfolios (RBP – Norway, governance – UK, technical cooperation – Germany) and exchanging information on their measures (Interview 6, 23).

In theory, there are two dominant strategies to avoid duplication and increase synergies at operational level: first, the prioritization of areas in which other donors have not (yet) been active and, second, the establishment of some form of exchange with other donors as well as national partners. Notably, early IKI measures have followed an interesting approach as the principle thematic flexibility for proposals helped fill thematic and financial gaps in partner countries (Interview 6). According to the primary data, many of the analysed measures established some form of coordination with non-German measures. A common approach was to hold regular meetings where different measures were presented and discussed. Three interviewees explicitly highlighted the close exchange between GIZ and FCPF, which materialized in joint missions in partner countries as well as backstopping activities by GIZ (Interview 12, 14, 35). For instance, GIZ staff supported countries in the process of developing their FCPF Readiness Preparation Proposal (R-PP) (Interview 14).

At the same time, though, several interviewees involved in implementing German REDD+ measures on the ground experienced competition between donors, including but not limited to the FCPF and UN-REDD programmes (Interview 1, 3, 10, 11, 14, 15, 17, 22, 31). Since all donors have their own agenda and are under pressure to be visible and deliver specific results, it is in their interest to “get through” with their activities – even if this creates overlaps or duplications (Interview 3, 11, 17). In this context, it must be noted that once a measure has been approved and implementation has started, there is usually only little room (and time) for changes. In other words, if overlaps or duplications have not been recognized and prevented at an early stage of planning, it is unlikely that activities significantly modified during implementation, regardless of the extent of donor coordination efforts on the ground (Interview 7, 10). Nevertheless, two interviewees reported that GIZ measures were slightly adjusted because other donors started to cover the original thematic focus (Interview 10, 14).

Depending on the institutional and human capacities of a partner country, donors and implementing organizations compete for attention as well as for access to and influence on key domestic actors (Interview 6, 15, 17). According to some interviewees, this does not necessarily apply to GIZ, which often has privileged access to partner countries due to its long-standing engagement (Interview 10, 12, 13, 14, 15). In contrast, access to domestic stakeholders was a challenge for early IKI measures, particularly when coordination was done by organizations without offices or connections in the country (Interview 7). IKI's work is now more frequently based on so called “country calls” that are coordinated with, mainly the environment, ministries of a country, and with GIZ, although this reduces the flexibility (Interview 6).

Finally, donor coordination is said to have a personal component and can thus be strengthened or weakened when the (local) leadership of a given organization changes (Interview 3). In a similar vein, three interviewees specifically highlighted the key role that national counterparts play in coordinating both external funding and donor activities (Interview 7, 11, 15). In some countries, the institution mainly responsible for REDD+ – often the Ministry of Environment – organizes regular meetings or roundtables at which donors share their activities and even form working groups (Interview 11, 15). On a positive note, more donors mean more options and concepts to choose from (Interview 26). However, since some partner countries strongly depend on donor money, they may have little to no interest in rejecting external funding, even if the corresponding measures are irrelevant, overlap with or duplicate existing efforts (Interview 7, 13, 31).

A more general issue raised in the interviews refers to the broad variety of donors and funding requirements. Especially in the first years, interviewees observed a “gold-rush atmosphere” within the donor community, with forest-rich countries being approached by a large number of actors representing different ideas of and approaches to REDD+ implementation (Interview 10, 11, 14, 15, 31). On the one hand, this variety has led to confusion and uncertainty among partner countries about what funding opportunities are available and how different measures can be implemented. On the other hand, it has allowed countries to pick “low hanging fruit” (i.e., choose funding approaches with criteria than can easily be met) (Interview 11, 14). Although donor coordination has considerably increased over recent years – with GNU increasingly becoming the nucleus – interviewees still saw considerable room for improvement, in particular with regard to divergent requirements and parallel approaches (Interview 11, 13, 14, 28). This also refers to REDD+ measures that are implemented by NGOs and private-sector actors without formal linkages to GNU or other donors. Especially for countries that have left the least-developing-country status behind, granting more (funding) ownership to countries – for example through multilateral efforts – has helped REDD+ measures to become more user-oriented (Interview 6, 31).

The problem of donor coordination, especially in relation to the creation of parallel systems for reporting (safeguards etc.) (Jagger et al., 2014), as mentioned earlier, is a theme broadly discussed in academia and one that is confirmed by the impressions shared in the interviews. It seems plausible, however, that a new dynamic has evolved as numerous interview partners (including independent experts) have confirmed that improved coordination among countries (especially GNU) is happening, as well as within FCPF, where the three countries are active. The fact that the UK and Norway have pledged money to REM, instead of relying solely on their own structures, is in line with this assumption.

German priorities and strategies

German priorities and strategies are only rarely mentioned in the primary data. Without being more specific, a few measures established a linkage to German priorities related to climate protection, forest conservation, biodiversity conservation, and poverty alleviation. A few others name a certain BMZ country or sectoral strategy.

Meanwhile, several interviewees addressed the different forest portfolios of German ministries. One interviewee argued that this diversity holds a high potential for assuring thematic flexibility as well as stability in response to thematic dynamics in international policy agendas (Interview 6). For instance, more classical development cooperation approaches by BMZ can assure thematic continuity, whereas BMU's focus on new ideas with a diverse set of implementers allows for testing new themes such as deforestation-free supply chains, and for the experience gained from this to be fed into the newly evolving international policy themes (Interview 6). With support being focused more definitely on actual emission reductions and the resulting need to quantify carbon stocks, one interviewee highlighted that BMU brought a new perspective into the German discourse on forest protection (Interview 1).

At the same time, though, the different forest portfolios – and the different interests and priorities that define them – were described as a problem or barrier, mainly because they hold the risk of establishing parallel structures rather than developing a coherent German forest conservation strategy (Interview 5, 28). The need for such a strategy becomes even more apparent considering that interviewees agree that REDD+ can only work if it is accompanied by other forest and land-use policies and measures (Interview 1, 2, 5, 9, 13, 23, 27, 28, 31, 32). The inter-ministerial coordination between BMU and BMZ also seems to be well established within countries. As described in the reference group to this study, the exchange with BMEL also works well, at least in the context of REDD+ as for the broader subject of international forest policy both on a formal as well as an inter-personal level.

The role of inter-ministerial coordination in line with the cross-sectoral nature of landscapes is broadly accepted as one of the key governance efforts toward successful implementation (e.g. for restoration efforts, Reinecke and Blum, 2018). In the literature, the view is supported that for the issue of international forest policy the involvement of various German ministries that represent different stakeholder perspectives is preferable to having one super-ministry in charge, not least because consensus is not easy to achieve between ministries that represent quite different interests in the matter, for example nature conservation,

economic, and (rural) development etc. (Busch, 2014). It is suggested that the ministries should still seek more effective coordination, to achieve more coherence across their policies, including on REDD+ and related to the working level. Relating this criterion back to the earlier mentioned need for REDD+ to more proactively consider the private sector and address powerful drivers of deforestation (in line with the extended ToC), the strategic role for BMEL, a ministry specialized in both agriculture and forestry from an outspoken economic perspective, seems like a natural step. Through the practice of regular interdepartmental coordination, the German government has principally established a formal venue for exchange.

4.3.2. Effectiveness

As described in section 3, most of the analysed measures have not implemented direct emission reduction activities. Instead, activities were focused on 'laying the ground' in terms of establishing the prerequisites for (a future) REDD+ implementation. This includes, for example, the following elements:

- Establishing a comprehensive and permanent National Forest Inventory (*REDD – National Forest Inventory in Mongolia*)
- Establishing a regional database for forest resource monitoring and complete MRV methodologies (*Reduction of Greenhouse Gases from Deforestation and Forest Degradation [REDD] in Central America and the Dominican Republic*)
- Reviewing subnational RLs to test results-based accounting and improve understanding of drivers (*Piloting Nested REDD+ Accounting in Colombia*)
- Producing studies, tools, methodologies, database and systems for national REDD+ implementation, field testing and adoption (*National REDD+ System for the Philippines*).

This illustrative list shows the varying and context-dependent issues partner countries need to address in order to be ready to implement REDD+ at national level (in phase 3). German measures correspondingly cover a very broad variety of supportive activities, with different approaches and objectives for the different countries. In line with the varying, complementary portfolios of the three different engaged ministries, effectiveness takes quite different forms in practice and in line with the distinctive level, scope, and focus that measures feature.

Contribution to outcomes

As mentioned above, REDD+ has evolved and shifted its focus over time. Similarly, its ToC has changed from a forest-based climate-change mitigation approach to a multi-objective framework with a strong development component, targeting the broader transformational changes needed in the land-use sector. Depending on what ToC is taken as a basis, we come to different conclusions when assessing the effectiveness of a measure in terms of its contribution to intended outcomes.

If measures are assessed against the backdrop of the original idea of REDD+, the contribution to intended outcomes is assessed in terms of avoided forest loss and reduced emissions at national level. In other words, it is expected that outputs generated by a given REDD+ measure directly contribute to emission reductions in the forest sector. The primary data shows that only a few have an explicit emission reductions component and have thus contributed to the intended outcome by conserving a specific area of forests through the establishment of national parks or municipal forests (see examples in Table 4).

Table 4 Examples of measures with outputs related to avoided deforestation

Country	Name of measure(s)	Activities and effect on reducing deforestation
Ecuador	<ul style="list-style-type: none"> Sustainable Natural Resources Management, Ecuador 	<ul style="list-style-type: none"> Protection/use agreement of municipal protected areas and eco-corridors (written agreements) on total area of 1.5 million hectares
Philippines	<ul style="list-style-type: none"> Climate-related Modernization of National Forest Policy and Piloting REDD Measures in the Philippines National REDD+ System for the Philippines 	<ul style="list-style-type: none"> Government disapproved conversion of 3,000 hectares for resettlement, instead promoted sustainable municipal forest management; prevented release of 306,000 tonnes of bound carbon (c. 1.1 million tonnes CO₂e) Designated/secured protection of forests; 101 hectares of forest loss avoided annually after 2011, annual emission reduction: 56,028 tonnes CO₂e compared to baseline (50% effective protection) Carbon capture through reforestation/afforestation efforts & agroforestry systems (on 2,178 ha with annual emission reductions of 18,745 t CO₂e) Land-use plans in municipalities contributed to avoided net deforestation of 161.5 hectares per year (c. 467,000 tonnes of CO₂e 2015-6)
Indonesia	<ul style="list-style-type: none"> Biodiversity Conservation through Preparatory Measures for Avoided Deforestation (REDD) in the Merang Peat Forest Area, Indonesia Harapan Rainforest – Pilot Restoration of a Degraded Forest Ecosystem on Sumatra, Indonesia 	<ul style="list-style-type: none"> Forest communities reduce illegal activities through alternative income possibilities; village nursery built for seedlings/rehabilitation programme Stabilized forest loss caused by settlement pressure and illegal land grabbing

Source: Authors, based on primary data

German REDD+ measures targeted at concrete emission reductions are the exception rather than the rule. REM may be seen as such an exception, because it rewards countries that have reduced their forest-related emissions. The basic idea is to provide “bridge finance” – currently at a price of USD 5/tCO₂e – to show partner countries that their past efforts are valued and being compensated, thereby possibly incentivizing (additional) emission reductions in the future (Interview 2, 3, 8, 9, 11, 31). This also means that payments have so far been made regardless of the extent to which Germany or other donors helped to implement the transformative changes that led to actual emission reductions. Yet more than one interviewee stated that the successful avoidance of deforestation in early mover countries is linked to several decades of support provided by KfW and GIZ (Interview 2, 31). The new expectations toward REDD+ as a development instrument have challenged REM implementers in that they were confronted with demands to prove how the money was spent after dispersal. This, however, in one interviewee’s view, perverts the actual idea behind RBPs that they reward emission reduction and hence past efforts (Interview 8). The debates suggest that the existence of two alternative ToCs in different contexts and organizations leads to confusion and conflicted discussions.

As shown in section 3, the revised ToC is characterized by a larger number of objectives and thus intended outcomes. While it still includes the goal of reducing emissions, the revised ToC also takes into account other transformative changes that go beyond mere emission reductions in forests, and may take place in parallel. Moreover, numerous outcomes in this analysis are relevant to the readiness process and do not (yet)

contribute to emission reductions. The different rationale of German support in REDD+ readiness and implementation seems to principally follow current considerations in academia and practice, which maintain that transformative change in the sector implies effects on various fronts, including for rural livelihoods, poverty alleviation, biodiversity conservation, adaptation to climate change, or promoting indigenous rights or good forest governance. The German REDD+ measures analysed broadly follow corresponding objectives and have generated outputs with a potential to contributing to the assumed diverse outcomes.

Examples from the primary data are measures that have successfully implemented (sub-)national forest policy reforms as well as measures that have improved respective governance processes, in particular with regard to stakeholder participation, tenure security, and jurisdictional approaches. Several interviewees confirm these contributions of German measures. Regarding the readiness support that German development cooperation on REDD+ provided, it was highlighted that it had, most notably, led to an unprecedented availability and quality of forest inventory data in the responsible ministries by establishing and fostering (sub-)national MRV and SIS (Interview 1, 6, 12, 14, 24, 25, 31, 34). Many also agree with the findings in scholarly and public debates on REDD+ (e.g. Angelsen et al, 2018a, 2018b, 2018c). However, it remains to be seen to what extent assumed effects will unravel in practice. Determining those outcomes as a direct result of the outputs of the measures at hand is largely limited within the scope of this study (see Section 6). Authors agree that, despite progress on different elements, transformational change – defined as a permanent shift away from business-as-usual – has not taken place yet (Bastos-Lima et al., 2017; Angelsen et al., 2018a, 2018b, 2018c; Arts et al., 2019; Duchelle et al., 2019). This applies to partner countries and donor efforts in general. For instance, the investigation of NICFI also summarizes that “[r]elatively little progress has been made in the extensive work to facilitate emission reductions through the formulation and implementation of national REDD+ strategies, policies and initiatives” (Office of the Auditor General, 2018, p. 130). This relates back to the earlier mentioned focus that most German REDD+ measures have on local projects, missing out on core (agriculture- and trade-related) drivers of deforestation and on relevant private and public actors beyond the typical partners. Beyond the phase of capacity building in readiness, a supportive narrative of the role of forests for development or the mainstreaming of mitigation in forests across all sectors, “powerful interests” within and outside the countries are seen as the major factors for the transformational change the ToC assumes will materialize (cf. also Angelsen et al., 2018b, 2018c).

Outputs achieved

In line with the varied objectives of the analysed REDD+ measures, the scope of their outputs and target indicators used to evaluate performance vary greatly between the 30 measures. Objectives at output level ranged from broader goals, such as reduced forest loss in a certain area, to more tangible technical objectives, such as the establishment of an effective forest monitoring system, to procedural goals such as increasing stakeholder participation or raising awareness, with respective activities focused on conducting stakeholder meetings or producing and publishing information.

Overall, 25 out of 30 final reports included a detailed list of intended outputs or target indicators,⁹ as well as the corresponding degree of achievement. For one measure, the final report was not yet available. In nine out of 24 cases, all intended outputs or target indicators have been fully achieved or overachieved. In a further 12 cases, some of the intended outputs or target indicators have been fully achieved while others have only been partly achieved. In four cases, the final report indicates that one or more outputs or target indicators have not been achieved while all the others have been fully achieved. Finally, in one case some outputs or target indicators have been fully achieved, some have been partly achieved and some have not been achieved. An overview of the explicit outputs and degrees of achievement is presented in Table 13 (Annex).

⁹ The terms “output” and “target indicators” are not used uniformly in the primary data. While some measures describe outputs and break them down into target indicators, others only use the two terms to describe the results achieved.

Factors influencing the (non-)achievement of outputs

According to our data, there are various factors influencing the achievement as well as non-achievement of intended outputs. In the following, the factors that have been mentioned most frequently and in the context of various measures are elaborated in more detail.

First, the primary data indicates that the support of national counterparts played a key role in achieving intended outputs. For the effectiveness of measures it was apparently very important that partner countries have a good understanding of their challenges and needs with regard to REDD+ and that they identify with and support the given measure (ownership) (see also Section 4.3.4). According to the self-reporting, political instability and government changes with varying political interests were one of the key reasons why outputs or target indicators could not be achieved. For instance, with regard to a measure implemented in Colombia (*Piloting Nested REDD+ Accounting in Colombia*) it was mentioned that changes in government and the responsible ministry led to the political decision to no longer pursue the implementation of a fully elaborated nested REDD+ system. In the case of REM, the recurring changes of government in Ecuador also explain the significantly slower progress in the country as compared to other early movers such as Acre or Mato Grosso (Interview 8). Our interviewees also suggested that some measures and stakeholders have been more flexible than others in adjusting to changing framework conditions (Interview 6, 10, 14, 31).

Second, a long-standing or trustful relationship with national and subnational counterparts is listed in the primary data as a key success factor for achieving the intended outputs. The interviewees confirmed this aspect, highlighting in particular the unique role of GIZ and embassies in many developing countries. Due to GIZ's long-term and comprehensive consulting work, its staff are usually well known and integrated, in particular at national level. As a result, they often have direct access to key stakeholders and are able to influence processes that are not open to other donors. Moreover, long-standing relationships allow for reflective learning in the sense that both sides can draw on the experiences and lessons learnt from earlier (development) measures in the region or country, simply by knowing what worked and what did not (Interview 6, 10, 13, 14, 15, 25, 35). Several interviewees compared GIZ to FCPF, stating that FCPF mainly operates through international consultants and NGOs, who are only present for a limited time, and who focus their work on the establishment of REDD+ elements and the carbon component of forests. In contrast, GIZ usually hires both international and local staff, who are constantly present. Another point raised is the fact that GIZ is specialized in technical development cooperation, which means that it works on cross-cutting themes that go beyond carbon but still play a key role for the success of REDD+, including forest governance, rural development, or biodiversity conservation (Interview 6, 12, 13, 14, 28, 31, 35). As one interviewee maintained, GIZ usually benefits from being seen "as a partner who provides technical support rather than an actor or organization deciding how much money the country gets from RBP schemes" (Interview 12).

Third, the primary data indicates that a participatory approach is key to effectively implementing REDD+ activities, and is somewhat linked to the second factor. According to their own reporting, many measures promoted constant dialogue, close cooperation and strategic partnerships between relevant stakeholders, in particular (sub-)national authorities, civil society, and the local population, including Indigenous Peoples. As this means that various – and often diverging – interests have to be taken into account, a few measures also worked with a conflict-sensitive approach that made use of mediation and moderation to find consensus. Moreover, some implementers report that they shared responsibilities and authority with local actors. The benefits and importance of a participatory approach were confirmed by several interviewees (Interview 8, 10, 11, 12, 13, 14, 15, 20). In addition, some stressed that making use of local experience and incentivizing the contributions of local beneficiaries are potential success factors. This may also take the form of financial contributions – for example local grants – which have been found to be useful instruments to build capacities and skills at local level (Interview 15). Considering the powerful drivers of deforestation, however, interviewees stated that there is still scope for more cross-sectoral stakeholder integration in measures – in particular the private sector and ministries other than the Ministry of Environment – not least to mobilize domestic funding (Interview 1, 5, 6, 12, 35). Interviewees also maintained that a consultation is not necessary for every matter and that they have experienced situations where consultations were just made for the sake of it, and not only in German measures (Interview 8, 22, 31). Likewise, it was naïve to conclude that just because the private sector was involved, practices would automatically improve (Interview 32).

Fourth, and related to this latter point, interviewees highlighted that current prices per tonne of CO₂ are clearly too low to compensate for the opportunity costs of foregone alternative land uses (e.g. cash crops such as oil palm or soy). Powerful drivers of deforestation still often undermine the ongoing efforts against deforestation, leading to national or cross-boundary leakage or meaning that REDD+ hardly transcends the demonstration level. Some interviewees argued that payments, such as under REM, while signalling a new recognition for the value of forests, still only serve as a “cherry on the cake” (Interview 1, 2, 3, 6, 9, 31). It was stated that RBPs under REDD+ may only properly incentivize transformative change and contribute to emission reductions if they form “part of a bigger picture”. This refers in particular to the political willingness and ability to address the drivers of deforestation (Interview 1, 2, 4, 6, 23, 31, 32, 35). In this respect, a fixed price may even be preferable for both funder and recipient as it increases the predictability of future funding relevant to incentivizing implementation efforts that also come at a price (Interview 8). An effective carbon price would have to be much higher than the current USD 5 per tonne, considering the pertaining pressure on remaining forests, and future pressure in countries with currently low rates of deforestation (Interview 8, 26). However, any such price considerations also have to prompt more critical questions in Germany and other industrialized countries regarding consumptive behaviour and respective value chain dynamics as the key pulling factors of deforestation (Interview 2, 6, 9, 32, 35).

Fifth, it is mentioned in the reports that a broad communication strategy contributed to the achievement of certain outputs. Raising awareness of forestry and climate issues, sharing information and being transparent about the goals and activities of a given measure, apparently had a positive impact in several cases. Such communication strategies may include “roadshows” presenting REDD+ as well as media coverage on results achieved through REDD+ measures. A few interviewees referred to the usefulness of such strategies (Interview 15, 31).

Sixth, some interviewees argued that reflexive learning is of utmost importance and needs to be done more systematically (Interview 3, 32, 35). This argument is based on the assumption that transformative – or even radical – change implies working beyond well-known approaches and long-standing partners. According to external experts consulted for this study, Germany is one of the most systematic learners among donors (e.g. in the GNU partnership) in the field of REDD+. However, while the internal evaluation approach of ministries and implementing organizations exerts a high level of detail and sophistication, the documentation system is not always perfectly adjusted for practical learning from lessons, be it in terms of timelines or the comprehensiveness of information (Interview 32, 35). Moreover, the long-established relationships and approaches, which are GIZ's strength, are not necessarily beneficial for innovation. In this regard, IKI's complementary and flexible approaches mark a first attempt at trying out and learning new ways of doing things (Interview 6, 31, 35).

Acceptance and legitimacy

Several final reports describe how the measures themselves or certain activities were assessed positively by stakeholders in partner countries. In some cases, specific elements and services developed through a measure – for instance, new information and datasets generated through forest inventories, new negotiation or cooperation formats on forest issues, and new sources of income generated by sustainable use of forests – are said to have contributed to an increased acceptance of REDD+ and forest conservation in the country, and with that to the legitimacy of the instrument. Also, as mentioned above, several measures are explicitly aimed at raising awareness about climate change and REDD+, either through public relations campaigns or through sharing information and knowledge.

More generally, as some interviewees maintained, REDD+ support has in many countries positively impacted how political actors and the population see forests for their own development: from something that can be used and removed for other uses to something that needs to be protected (Interview 6, 13, 15, 31, 32, 34). At the same time, though, the interviews revealed that implementing organizations often struggled to make REDD+ “tangible” for actors on the ground, i.e., those that actually work in and with forests. For these actors, REDD+ is often a complex and highly political approach (Interview 12, 13, 17, 20, 27, 28, 31).

Furthermore, some reports, as well as several interviewees, stated that acceptance for REDD+ is currently decreasing in many partner countries. In particular, both national and local stakeholders are increasingly

disappointed because the efforts and resources that they have invested in the readiness phase have not (yet) been financially rewarded (Interview 13, 16, 20, 34). As such, several interviewees were alert to the discrepancy between internationally raised expectations on the one hand and the growing insecurity about credible and sufficient (future) finance on the other hand (Interview 6, 13, 20, 31). Also, in this respect, it appears that for the implementation of a fully functional and accepted phase 3 RBP instrument, REDD+ still needs more time, resources, efforts and financial support.

Governance

The primary data suggests that the quality of political steering has not improved in all cases, and that weak leadership, administrative deficits, lack of coordination between different ministries and government levels, and between government and civil society have persisted after the measures were completed. By contrast, some reports explicitly mention positive experiences when working with stakeholders in partner countries. Key elements highlighted include:

- Advanced methodological knowledge and experience with forest inventories and forest planning
- Competent participation in regional or international discussion fora on REDD+
- Inclusive procedures at all levels
- Ability to assume responsibility and carry out certain financing and implementing measures independently.

Several interviewees confirm the primary data, stating that governance is a key ingredient for achieving the desired transformational changes in the forest and land-use sector. In this regard, they maintained that REDD+ is not just about exercising a new PES scheme for carbon in trees (Interview 1, 4, 3, 11, 12, 13, 14). Covering aspects such as forest policy reforms, steering capacities, or tenure security, governance processes mark a traditional field of German development cooperation, and existed long before REDD+ came into play. In the interviews we repeatedly heard that the first tangible effects of reduced deforestation in countries such as Brazil or Indonesia drew on decade-long German engagement in those countries, especially through GIZ (Interview 2, 10, 20, 31, 35). Likewise, ongoing and complementary development cooperation in support of governance more generally plays into the success or failure of REDD+ measures, not least because countries like Colombia or Brazil have obtained a high level of self-determination over the years (Interview 8, 26, see also the case studies in Sections 5.1 and 5.5).

Co-benefits

Highlighting the multiple benefits that REDD+ has for cross-cutting themes such as biodiversity or poverty alleviation is critical for its acceptance and the longevity of the instrument itself.

According to their self-reporting, German REDD+ measures generated various social and ecological benefits. This includes the conservation of biodiversity, which is listed by more than half of the measures. Other co-benefits mentioned in the final reports are (in decreasing frequency): improvement of livelihoods and poverty reduction through creation of additional or alternative income and jobs, empowerment of women and gender equality, promotion of human rights as well as land rights, empowerment of indigenous communities, and good governance. The data available for this study does not allow us to verify this information (see Section 6). Also, it is not always clear from the reports how the co-benefits were measured.

As said, several interviewees described REDD+ as the nucleus for a new perspective on forests and rural areas as it has shifted from portraying forest destruction as a necessity for development to portraying it as a threat to social and economic well-being more generally (Interview 6, 12, 31, 32). Interviewees also see REDD+ (i.e. as avoided conversion of natural forests) as leading quite “naturally” to ecological co-benefits (Interview 26) and to positive effects on the livelihood of forest-dependent people (Interview 24).

Safeguards

Owing to the numerous eligible activities and contested rights over land and benefits from the instruments, safeguards are an indispensable element of the functioning of REDD+ and are therefore a key requirement for RBP. With rather vague guidance provided through the seven Cancun safeguards, countries participating in REDD+ have been supported in operationalizing safeguards for their country specificities, establishing a robust SIS that allows them to demonstrate how they addressed safeguard issues and to be eligible for RBPs. It is therefore no surprise that numerous German REDD+ activities – especially in measures oriented at national capacities – were targeted at the development of safeguards or reporting, respectively.

In their self-reporting, several measures state that they have promoted and supported one or more of the following five (out of seven) Cancun safeguards: consistency with national and international priorities, transparent governance, respect for knowledge and rights of Indigenous Peoples and local communities, effective participation of relevant stakeholders, and consistency with conservation of biological diversity. Some measures put special emphasis on the equal representation of women and men in the planning and implementation process and also ensured that women benefit equally from outputs generated. It must be noted, though, that the extent to which these safeguards have actually been promoted and supported on the ground cannot be assessed in this study on the basis of the data provided.

When asked whether safeguards were successfully addressed in measures, several interviewees confirmed that, especially with regard to social safeguards, major steps were taken in many countries and functioning systems of stakeholder involvement were mostly established (Interviews 6, 8, 24, 26, 31, 32, 33). In some cases such as REM (Acre), the measures could actually already draw on quite effective prerequisites (Interview 8). With regard to the two Cancun safeguards not mentioned in the primary data – addressing risks of reversals and reduction of displacement of emissions – two interviewees stated that the possibilities for action have been limited, as these safeguards require a consistent and long-term national approach, which does not yet exist in partner countries (Interview 3, 11). This relates back to the earlier considerations of addressing the drivers of deforestation, and working with the agricultural and other sectors more prominently. As explained earlier, a genuine challenge remains: translating safeguards into the (sub)national realities such that they can be usefully employed and would address the actual risks important in the specific context, and not just produce a lot of paper (Interview 8, 22), as induced by around 150 indicators in the case of FCPF. As interviewees highlighted, no other (forest-related) process exists, where comparably comprehensive safeguards were in place. However, according to more than one interviewee, the (almost paranoid) fear of not properly addressing safeguards in practice led to paralysis, and partly explained why disbursement (e.g. the Carbon Fund) was substantially delayed (Interview 8, 22, 26, see Section 4.3.1.).

Unintended consequences

According to the primary data, there are only two measures where unintended consequences have occurred. In one case (*National Forest Monitoring and Information Systems for a Transparent and Truthful REDD+*), the forest monitoring tool established through the measure has been used for applications not foreseen during conceptualization. More specifically, it has been used to establish baselines for land and forest-cover monitoring and assessment projects, and has also been used in project-evaluation activities. In the second case (*Harapan Rainforest – Pilot Restoration of a Degraded Forest Ecosystem on Sumatra*), the implementing organization did not anticipate the high population pressure resulting from one of the measure's key activities (namely the establishment of a restoration concession for enhancing carbon stocks). As explained by an interviewee, this has even led to violent conflicts between the partner government and the settlers, which the German implementer was not able to mitigate (Interview 6). Meanwhile, another interviewee stated that the high value that forests and their sustainable management have (re-) gained can be seen as a positive unintended consequence of REDD+ cooperation more generally (Interview 31).

As described in more detail in Section 6, the analysis of self-reporting data must take into account issues such as “social desirability” and “impression management”, which means that issues such as negative unintended consequences might not always be reported. In the absence of additional data, we can therefore not make a valid statement on unintended consequences of German REDD+ measures.

4.3.3. Efficiency

Both formally and practically, the instrument is still largely in its inception or preparatory phase, with the exception of REM and the Amazon Fund. Several interviewees confirmed that actors at all levels – including German actors – have underestimated how much time, effort and (financial and human) resources would be needed for readiness activities (Interview 1, 2, 3, 4, 11, 16, 26, 34). Owing to a variety of factors (as elaborated in Section 4.3.2), “everything has taken much longer than planned” (Interview 2).

An important point counteracting efficiency considerations stressed in the interviews is that both donors and partner countries to a certain extent need to first explore what works. The very nature of new approaches and innovative ideas, like REDD+, it was argued, requires a trial and error approach (Interview 4, 6, 31). Still, as one interviewee maintains, “we must be able to know beforehand where problems may arise and how our measures can be adjusted” (Interview 2). At least to a certain extent past experiences and lessons learnt should and can be taken into account. Rather than “throwing out the baby with the bath water” (Interview 6, 26), piloting and testing tools and methods, for example at subnational level (in phase 2), can build the basis for scaling up to phase 3.

These aspects, but also the broad diversity of REDD+ measures complicate efforts to analyse the efficiency of specific measurements, i.e., how well available resources (time, finance, personnel) were spent in relation to the objectives and outputs and also in comparison to the counter-factual. The high complexity and scientific uncertainty make it hard to determine what this counter-factual world without REDD+ would look like (Interview 26).

Principally, the systematic tracking and evaluation practice in German development cooperation allows light to be shed on the expenditure on, and timelines of, the REDD+ measurements. However, the level of precision was often below what would have been required for a more comprehensive analysis.

Costs and timeliness of outputs

The analysis reveals that 11 measures report delays without budget increases, seven report additional costs but no implications for the timeline, and another four report delays as well as increased costs. The most common reasons for delays were:

- Delays in signing
- Specific framework conditions in partner countries, such as:
 - Changing political interests and priorities
 - Slow decision-making procedures
 - Unclear definition of long-term goals
 - Administrative deficits
 - Increasing illegal activities in areas where the measure took place.
- Institutional restructuring processes, including employee changes (both within implementing organizations and counterparts)
- Gaining trust and establishing dialogue; cooperation with stakeholders in partner countries
- National counterparts requested modifications
- Delays by third parties (e.g. independent audits)
- Poor and disastrous weather conditions.

Meanwhile, the most common reasons for budget increases were:

- Specific framework conditions in partner countries, such as:
 - Outbreak of violent conflicts that increased security management costs

- Low capacities of partners requiring greater management efforts
- Changing political climate and acceptance of REDD+ increasing efforts for PR.
- Additional advisory / services / components needed due to changing nature and increasing number of objectives of REDD+
- Number and heterogeneity of target group increased during implementation
- Personnel and travel costs higher than expected
- Planned budget not sufficient for implementing activities with long-lasting impact
- Other than planned, co-financing by partner countries or other donors was not realized
- Other than expected, international carbon markets did not materialize as additional source of funding.

Due to these various reasons, not all measures could be implemented efficiently, sometimes because of the planning and design of a given measure, sometimes the fact that framework conditions were only minimally within the control of the implementing organizations. In most cases, at least 90% of the funding applied for has been disbursed. Our analysis is too inconclusive to suggest that budget efficiency was actively pursued or desirable for implementing organizations and the result of good planning. As one interviewee maintained, budget exhaustion may also derive from high incentives to not spend less than applied for, “because then you also get less” (Interview 27).

Considering the pioneering character of numerous REDD+ measures, the indicator is relativized to a certain extent. A certain flexibility in the availability of time and resources – also well beyond initial limits – was described as an important aspect of the economical use of resources so as to avoid measures generating outputs that do not take into account learning from past experience (Interview 6). Another key aspect that is highly important for sustainability is the partner country's ownership of the REDD+ process. For the sake of securing the partner's self-determination, especially by building up technical and governance capacities, a certain level of inefficiency seems justified (Interview 24) and the possibility of extending project times or budgets may be helpful. A genuine difference exists between KfW and GIZ. In line with the nature of their services, KfW principally operates with fewer personnel on the ground when compared with GIZ. Usually, a project manager in Germany is responsible for coordinating several measures at once, while the implementation in partner countries is monitored by international as well as local consultants hired by KfW (Interview 9).

In this context, it must be highlighted that IKI has more recently decided to extend the duration of projects to up to eight years, after finding that the budgets for the original three-year projects were being regularly exceeded (Interview 6). In fact, the final reports of four out of 14 analysed IKI measures explicitly mention that the pre-set duration was too short to adapt to changing framework conditions and to achieve lasting results. The data also indicates that some REDD+ measures have been too ambitious, considering the time and resources available. One such example from the German REDD+ portfolio is the measure *Guyana Protected Area System*, where some of the intended outputs could only be achieved with delay or not at all (Interview 9).

Input–output ratio

Based on the data available, we are not able to make statements on how adequate the relationship between costs (inputs) and benefits (outputs) has been for each individual measure (see Section 6).

Input–output ratio in terms of avoided emissions

Based on the data available, we are also not able to systematically assess the input–output ratio in terms of avoided emissions (see Section 6). Regarding its incentives-based approach, REDD+ was initially promoted in the literature as a particularly efficient approach to reducing emissions in the forest sector at comparably low costs (Davis and Daviet, 2010; Angelsen et al., 2018c). For the specific case of RBP and REM, one expert also sees a clear advantage in using RBP to address the deforestation problem in comparison to the more classical approaches to forest conservation applied in the past 30 years. Past finance efforts often failed to

adequately address the actual drivers (Interview 8). Recent criticism of REDD+ maintains that the instrument has still disappointed by not being able to attract private investors to complement the limited public budgets (Kill, 2019). The analysis of the German measures supports the impression that the implementing actors – with some exceptions (esp. REM, and some singular measures) – still can and should improve cooperation with the private sector to foster this criterion.

4.3.4. Sustainability

The engagement in REDD+ measures supported by Germany thus far has been labour, cost, and skill intensive, well beyond expectations. This puts the continuity of measures at risk after termination unless human and financial resources are secured for sustainability.

Financial resources

The primary data shows that while some countries have started to develop co- or even self-financing initiatives and now allocate national or local budgets to REDD+, others are still not capable of mobilizing domestic finance for the forestry sector. In this regard, and to a greater or lesser extent, all countries in which German REDD+ measures have taken place are dependent on further external funding for forest conservation. Regarding the continuation of specific achievements, the analysis has shown that only a few measures have contributed to access to additional funding. In four cases, the activities implemented or certain components introduced by a German REDD+ measure were taken up by another measure or found continuation in a national programme: Mongolia, Colombia, ASEAN and Paraguay (see measures 2, 6, 11 and 24 in Table 11 in Annex). Also, other donors have scaled up certain approaches from German measures. Similarly, measures that have successfully established alternative income options for farmers are expected to be self-sustaining to a certain extent in the long-run. Likewise, measures that established open-source tools without recurring fees for domestic actors are sustainable.

Several interviewees pointed to the way persisting uncertainty about international REDD+ finance and low carbon prices vis-à-vis high opportunity costs and powerful drivers of deforestation jeopardizes the long-term prospects of the instrument more generally and well beyond the German engagement (Interview 1, 6, 9, 26, 31, 35). Apart from that, the involvement and accountability of the private sector, for instance through permanent purchase agreements for deforestation-free products (including procurement for all public expenditures in and outside Germany) or by buying REDD+ credits in voluntary markets, were mentioned as a means to maintaining financial sustainability (Interview 10, 32).

Human and institutional capacities as well as institutional structures

According to their self-reporting, implementing organizations put specific emphasis on human and institutional capacity building to ensure the continuation of activities that are relevant for generating the intended outputs and outcomes. Human capacity building, in particular, is described as key to increasing the agency and ownership of domestic actors in partner countries. Many of the analysed measures were explicitly aimed at strengthening existing or establishing new capacities, especially with regard to the development of comprehensive REDD+ national policy structures and monitoring frameworks. This often included the restructuring of responsibilities and tasks within and across ministries and forestry authorities, as well as the establishment of new coordinating bodies, management units, and teams that were specifically trained on forest management and REDD+. Within the restructured or newly established institutions, the production and dissemination of knowledge products was listed as an important factor for promoting sustainability.

The necessity of such efforts was confirmed by several interviewees (Interview 2, 3, 10, 11, 12, 13, 14, 15, 20, 24, 25). Three of them specifically pointed to examples where German REDD+ measures enabled domestic stakeholders to apply the methods and instruments required for REDD+ implementation, including MRV systems, SIS, and NFMS (Interview 10, 14, 20). At the same time, though, three interviewees criticized the fact that forestry science and education are not presented well enough in capacity building activities under REDD+. In their view, stakeholders in most REDD+ countries still lack the know-how to sustainably use and manage forests in the long term (Interview 5, 27, 28). Moreover, the harmonization of capacities and structures developed at different levels has proven to be difficult in some cases (Interview 10). According to

two more interviewees, technical capacities are still weak in many REDD+ countries (Interview 3), in particular at local level, as well as for the accounting required for RBP (specifically MRV, Interview 31). There are cases, for instance, where a SIS has been established but has so far not been used in practice (Interview 3). With regard to the dissemination of knowledge, the establishment of new institutions was negatively perceived, in particular if it gives rise to parallel structures that are managed by external stakeholders, which decreases the agency and ownership of domestic actors (Interview 12). Similarly, a forest inventory is of little avail when its results are not translated into action (Interview 12). The significance of the counterpart's political willingness is further elaborated in the next section.

On a more general note, German support was seen as displaying the highest continuity on the topic of forest conservation in technical development cooperation (Interview 6, 10, 14, 15, 25, 31, 32, 35), for example in comparison to the UK and Norway. Several interviewees stated that achievements in some of the measures can be clearly linked to Germany's decade-long engagement in forest governance and related capacity building (Interview 2, 4, 6, 10, 12, 14, 31, 35).

Ownership and willingness of partner countries

The primary data stresses that ownership and willingness of partner countries is of key importance to ensuring the sustainability of the outputs and changes a measure generates. Yet from the very beginning, countries have had different interests and visions regarding REDD+, which has clearly influenced their overall willingness to participate in the implementation of different measures. In the final reports, the following issues are described as key risks to the sustainability of measures: government changes – which sometimes go hand in hand with staff and budget cuts, changes in personnel, and changing political vision and priorities – general lack of political interest, high fluctuation in ministries, lack of coordination between different ministries and sectors (in particular agriculture and forestry) – the weak role of the ministry responsible for REDD+, economic and political instability, missing or non-functioning state structures, corruption, and violent conflicts. According to the primary data, some of the above-mentioned risks could be lowered when REDD+ components were institutionalized and anchored in national regulation. This refers, for instance, to new concepts of forest management and forest land-use planning incorporated into long-term national planning and budgeting. Yet, such components usually do not work independently. For instance, a national protected area system enshrined in law can only contribute to forest conservation if monitoring, law enforcement, and management are functioning as well.

Some interviewees stated that the risks appear particularly “threatening”, not least because implementing organizations usually have limited power to influence those issues (Interview 3, 14, 20). At the time, though, the experience of some interviewees was that political changes have less impact if the technical personnel of the partner countries remains the same (Interview 11, 12). In some countries, for instance and according to the interviews, external support for REDD+ only started when domestic actors had already taken their own first steps, such as developing the FCPF R-PP (Interview 11, 12, 15) or on PES (Interview 33).

In numerous countries, legal framework conditions for implementing REDD+ are still not in place, particularly with regard to land rights. Even in countries where there is considerable political will and steps were taken toward implementing REDD+, land tenure continues to be an unresolved issue (Interview 15, 34). In this context, it must also be mentioned that many framework conditions for REDD+ are determined outside the forestry sector. This refers in particular to the energy, agriculture, and mining sectors, which remain the key drivers of deforestation and forest degradation. Sustainable REDD+ measures not only need the commitment of actors directly involved in forestry, but also of those from other sectors (Interview 1, 2, 12, 15, 32). One interviewee further explained that a good strategy for increasing sustainability is to establish ownership beyond state structures, for instance by raising public awareness, motivating local stakeholders, and involving the academic sector and civil society (Interview 15). In general, though, it remains to be seen to what extent the motivation of domestic stakeholders – both state and non-state actors – can be held at high level. Given the unclear financial future of REDD+ and low amount of RBF that countries have received so far, REDD+ risks losing significance in and for partner countries (Interview 6, 13, 20, 28, 31).

These findings are in line with academic assessments of ownership. Studying processes in 12 REDD+ countries, Korhonen-Kurki et al. (2014) find that the successful implementation of comprehensive REDD+

policies depends, among other things, on national ownership of REDD+ proponents. With regard to willingness, the authors find that the prior initiation of policy changes can be a key factor facilitating progress on REDD+. For instance, an already established PES scheme “can smooth the path for REDD+” (Korhonen-Kurki et al., 2014, p. 182).

Integration into other development and climate measures

As an integral part of the framework under UNFCCC and a country's NDC, REDD+ is formally well integrated into the broader climate strategy and policy framework of a country. Typically, the same ministry is in charge of REDD+ and other climate measures, and the fact that REDD+ experiences in the 2000s and early 2010s precede NDC formulation surely supports the observation that these experiences inform NDCs. In the primary data, we find several linkages of the REDD+ measures to national climate strategies. Some final reports further mention that components of a given measure have been anchored in national development plans, development priorities, and sector programmes.

Some interviewees shared the view that integrating REDD+ into a broader climate and forestry strategy was highly important (Interview 10, 13, 15). As mentioned before, inter-ministerial and cross-sectoral coordination – especially between forestry, environment, and agriculture – and their buy-in, generally remains a major problem for integrated, cross-sectoral approaches to land use (see the factors in Section 4.3.2).

Climate proofing

As an instrument under the UNFCCC, REDD+ should naturally be sensitive to considerations of resilience and adaptation, not least for economic reasons to avoid non-permanence. However, especially since the analysed measures mostly cover readiness activities focused on capacity building, policy development or stakeholder participation, this aspect appears to be less meaningful for the sustainability of the measures. Accordingly, it may be less of a surprise that climate proofing is not an issue discussed in the primary data. Also, the resilience of actors or institutions is not discussed in the primary data except for two cases where reference is made to the strengthening of resilience of forest ecosystems to climate change or the support of organizations in increasing their resilience.

Permanence and leakage

Permanence and leakage clearly are major challenges for REDD+ implementation in phase 3, that have to be solved at national level and as part of a coherent national REDD+ strategy. German actors supporting the development of such a strategy can (and already do) consult the national partners on ways to address both issues – however still mostly on a rather theoretical level, seeing that most German REDD+ measures are piloting implementation at subnational level and therefore do not yet support solving these issues more systematically (Interview 11). In the exceptional case of REM, emission reductions of a certain value have been decommissioned to cover measurement, leakage, and permanence risks. Other measures, however, may be assumed to exert only limited influence on issues like permanence and leakage.

4.3.5. Overarching (development) impact

As mentioned before, the data basis for this study is not sufficient to draw linkages between outputs and outcomes, especially in relation to emission reductions. Evidently, it would be methodologically unsound to suggest that broader development – let alone reductions in deforestation and respective emissions – impacts were derived from specific REDD+ measures in this study. Deforestation is still increasing, with or without REDD+, and there are multiple and complex causes, including the effects of climate change (forest fires, phenomena like El Nino, etc.) that are prone to high scientific uncertainty and make it hard to determine what the world would look like if there was no REDD+ (Interview 26). Such effects appear mostly outside the immediate control and reach of individual measures targeted at readiness or piloting as is the case with most of the measures analysed here. However, the data are meaningful enough to suppose that the German engagement on REDD+ – or forest conservation more generally – has left its traces and contributed to significant changes in the partner countries, at least in some respects.

One aspect that was widely agreed to is that REDD+ has brought forests back high on the international and national agenda (Interview 1, 6, 12, 23, 24, 28, 31, 32, 34, 35). The linkages between forests and climate, forests and land rights, as well as forests and Indigenous Peoples are increasingly better understood and discussed in more detail at all levels (Interview 28). As such, REDD+ was described as a catalyst for addressing various issues related to forest conservation and sustainable use (Interview 10, 25, 28). As a result, the number of initiatives and actors – both at different government levels and from outside the public sector (NGOs, academia, and even private actors) – working on forestry, land use, and rural development is increasing. The involvement of many more stakeholders also attracted public attention and opened up new funding opportunities (Interview 15, 27).

Furthermore, our interviews suggest that some elements established through REDD+ are likely to contribute to achieving broader development and governance objectives:

First, countries never had more and better data on forest cover and land-use change than today (Interview 1, 6, 10, 12, 23, 24, 26, 31, 34). It was often through REDD+ measures that the methods and tools needed to gather and analyse such data have been made available to a wide range of stakeholders, including at local level (Interview 1, 6, 10, 12, 31, 34). Also, the quality of data has significantly increased over time, as visible for instance in FAO's Global Forest Resource Assessment 2020 compared to 2015.¹⁰

Second, REDD+ has brought new attention to the inclusion of Indigenous Peoples and rural communities. While acknowledging that the relationship between REDD+ and those actor groups is far from free of conflict, interviewees also argued that readiness activities under REDD+ – especially around safeguards, SIS and benefit sharing – have re-stimulated and further deepened the discussion about indigenous and community rights (Interview 1, 2, 3, 6, 25, 29, 31). In some countries, the topic has even spilled over to other sectors, such as mining (Interview 10). Some interviewees also stated that German REDD+ measures – in particular REM – have generated new empirical evidence that consultation processes and institutionalized forms of cooperation with Indigenous Peoples and rural communities work (Interview 3, 8, 9, 11, 20). Although this clearly does not apply to all REDD+ measures and donor efforts, such experience may reduce misconceptions of, and barriers to, effective stakeholder cooperation in partner countries.

Third, although there is still considerable room for improvement, REDD+ has stimulated inter- and intra-sectoral dialogue as well as regional cooperation that may expand forestry issues in the future (Interview 10, 12).

Fourth, increased knowledge, as well as technical and practical capacities in the field of sustainable forest management, are expected to serve forest users in the long run, even if REDD+ is not implemented as planned (Interview 15).

Finally, interviewees highlighted that REDD+ has brought the idea of RBP to the forestry sector. In their view, this is a positive development as it increases the accountability of public-development cooperation (Interview 1, 5, 12, 14, 28).

Despite these advances and the key role that German cooperation has played in improving monitoring and accounting capacities as a prerequisite for phase 3, advanced systems relevant to verification of reductions are still often lacking in most countries. Partly owing to the fact that there are hardly any real technical experts on REDD+, donors – including Germany – often chose simpler or “known” approaches in technical cooperation, which contributed to the fact that countries are still only getting ready for REDD+ (Interview 31). With most donors opting for “business as usual” ODA practices focused on project level or ministerial capacities, an opportunity was missed for triggering deeper, system-wide transformations that addressed the key drivers of deforestation in partner countries and at home (Interview 32, less explicit: 23).

¹⁰ In the context of the current Forest Resource Assessment, FRA 2020 (forthcoming), FAO has compared the data quality with the earlier Assessment of 2015 and has kindly pre-shared their insights with the authors via email.

In this respect, and despite the contributions of REDD+ to the transformative changes needed in the land-use sector, interviewees agree that the majority of REDD+ efforts have so far not been able to address the underlying drivers of deforestation and forest degradation in developing countries. This means that the impact of REDD+ – including of German REDD+ measures – will depend on whether countries succeed in effectively addressing powerful drivers of forest loss and land-use conversion, which are fuelled by forces in consumer countries and markets typically outside the realm and control of partner countries (Interview 1, 2, 6, 9, 23, 32, 33, 35). Given the financial “peanuts” that REDD+ currently offers in comparison to the opportunities in agricultural production, reducing forest-related emissions at national scale (phase 3) will not only depend on the capacities and political willingness of partner countries, sufficient international finance and a higher price for carbon to compensate countries for their efforts and forgone benefits. Also critical are notable disruptions in global value chains and trade relationships between donor and recipient countries (Interview 1, 6, 31, 32, 35). It can thus be summarized that REDD+ measures in partner countries will play a significant, but still only complementary, role in addressing the root causes of deforestation.

5. CASE STUDIES

Based on the insights generated through the analysis, we selected five measures to be presented in more detail. The aim was to give readers greater insight into the design and performance of individual REDD+ measures so as to gain a better understanding of how the implementation of REDD+ works in practice in individual contexts. Evidently, experiences made within these measures should not be seen as being representative for the overall German contribution to REDD+.

The selection of the five cases builds on two requirements: first, we were able to conduct in-depth interviews with actors involved in the implementation of these measures, which yielded a second source beyond the primary (self-reporting) data and allowed us to clarify certain points. Second, the measures provide illustrative insights into different approaches to REDD+ support and a certain variability of issues that REDD+ countries face in REDD+ implementation. This, in our view, allows more context- and problem-sensitive discussions of the analytical results presented for 30 German REDD+ measures.

When reviewing the experiences in the case studies a general assumption seems to be reaffirmed, that structures and conditions within partner countries are highly decisive for the success of measures. Often such conditions are beyond the control of development cooperation partners and not always easy to anticipate when trying out a new approach like REDD+. Efficiency-related delays in project duration occurred in all five cases, despite their variability, and often related to framework conditions, such as institutional restructuring, but also to the reluctance of partners to cooperate on the matter.

The willingness and commitment of counterparts, often that of the national government, is key in the measures. Where national governments have or show no interest in the measure, for whatever reason (political economy, peace processes leading to shifting priorities, etc.), it seemed useful to shift to technical or lower policy (state) levels or even other actor groups – a key consideration regarding the sustainability of measures. For organizations with long-lasting ties in a country it may be easier to identify such counterparts, but also harder to let go of their typical partners.

Likewise, it seems that a key factor is what structures are already in place in the partner country and how responsive they are to the approach of the measure. It can be useful to take proactive advantage of political and organizational achievements of the past. Some countries bring in highly skilled staff or functioning institutions for stakeholder involvement or benefit sharing. Across the cases, the integration of stakeholders, particularly from other relevant sectors but also those in situ, like Indigenous Peoples and civil society groups, was highly critical (e.g. regarding tenure rights or benefit sharing).

Identifying points of reference that make the measure relevant to the peculiar needs of the counterpart, and possibly letting go of overly rigorous plans, schedules, or even the whole support, may be decisive for implementing organizations to be able to add real value and sustain the self-determination of (especially more advanced) countries, as in this sample. Along with such flexibility may come delays and budget extensions.

In this regard, donor coordination remains a key element and often a challenge, maybe because of competition over who is in charge of what element of REDD+ or which region. Having to work and communicate with more than one counterpart often overwhelms partners and leads to inefficiencies and delays. The implementing organizations, at least in some cases (e.g. Colombia and Central America), have shown creative ways to achieve more coherence, mutual back-up, and less overlap.

5.1. “REDD Early Movers (REM) Acre (Phase I)”

The information presented in Table 5 and in the following text is based on primary data (self-reporting of implementing organizations) as well as interviews with actors involved in the implementation of the measure (in particular interview 8). In addition, insights from secondary literature are presented.

The *REDD Early Movers (REM) measure (Phase I)* in the state of Acre, Brazil, is the first REM component fully implemented and concluded. It is often referred to as a prime example and pioneering proof of concept for (non-market) RBPs, which helped to further develop such RBP schemes and REDD+ in general. In fact, the state of Acre is a unique place and the economic situation in the state was in good shape at the start of the programme. Despite the fact that the governor showed only little interest in REM, at least at the beginning, high political commitment developed quickly, and the fact that forest communities were already highly valued and accepted by the government provided a decisive pre-condition for a fairly straightforward implementation. Acre could look back on various existing programmes supportive of benefit sharing at local levels, one of the key requirements for RBPs under REM. Institutionally, REM could be perfectly integrated into the existing Incentive System for Environmental Services (SISA), which was seen as “state of the art” at least at the time of its inception. Also, the fact that participatory and inter-sectoral coordination structures were already an established “tradition” in the state smoothed the overall process.

It is worth noting that the EUR 25 million of RBP under REM phase 1 only compensated for around one-third of Acre’s total emission reductions between 2011 and 2015 (or: 16.5%, plus 17.7% risk buffer). While REM was, in principle, willing to pay more to Acre, there was simply no other funder who wanted to contribute at that time. Looking ahead, the comparably slow progress in phase 2 in Acre demonstrates how difficult it is for countries with successful past emission reductions to achieve further emission reductions, especially in times of high political dynamics, as in Brazil. The change in Acre’s state government in 2018 shows how such dynamics may undermine any further achievements. According to observers, the experienced staff in charge of the process in Acre’s governments was completely changed immediately after the elections, after which the necessary institutional knowledge had to be re-built. In the secondary literature, the REM Acre has been critically discussed. For instance, Bastos-Lima et al. (2017) point out that SISA has not been able to create coherence between conservation and rural development policies on the one hand and agricultural policies, in particular regarding cattle ranching, on the other. On a positive note, they conclude that the case of Acre shows that “sub-national initiatives can play important roles, including in monitoring forest practices, or in engaging local stakeholders”, noting, however, that “their success is hindered by the persistence of business-as-usual incentives stemming from the national level, and over which sub-national programmes have little control” (Bastos-Lima et al., 2017, p. 17). Still referring to the example of Acre, the authors also express their concerns that due to the limited duration of contracts, REM might become “just one more temporary subsidy or one more ‘market’ that competes with existing ones” (Bastos-Lima et al., 2017, p. 17). While REM is no market-based instrument, but a scheme tailored to compensating results in ERs, the critics point to the importance of political and economic dynamics for the sustainability of measures, as also seen in other measures. At least in Brazil, new political momentum and resistance by governors against President Bolsonaro’s destructive political agenda with regard to forests is building up.

Table 5 Case Study: REDD Early Movers in the state of Acre, Brazil

REDD Early Movers (REM) Acre (Phase I)			
Commissioning entity		BMZ	
Implementing organization		KfW	
Duration		2012 – 2017	
Budget		EUR 25 million (EUR 16 million BMZ + EUR 9 million BMU)	
Aim			
Significant emission reductions (ER) from avoided deforestation and forest degradation in the State of Acre			
Activities implemented			
<p><i>1. Support for SISA / ISA Carbono</i></p> <ul style="list-style-type: none">• Capacity building regarding REM and SISA;• Implementation of safeguard standards;• Studies on CO2 emissions in Amazonia;• Monitoring and environmental control in priority areas;• Land regulation in priority areas;• Development of new sub-programmes and components;• Knowledge management and exchange;• Programme coordination and monitoring. <p><i>2. Indigenous Peoples sub-programme</i></p> <ul style="list-style-type: none">• Training / financial support of IPs as agroforestry agents; implementation of agroforestry systems in Indigenous communities;• Implementation of management plans for Indigenous areas (call for tenders);• Strengthening Indigenous culture through small community centres promoting joint cultural/economic activities (call for tenders). <p><i>3. Sustainable Production sub-programme</i></p> <ul style="list-style-type: none">• Promotion of sustainable production (systems) of farmers committed to reducing deforestation and implementing sustainable production methods (e.g. avoiding fire);• Smallholder production (agroforestry systems, alternative cultivation methods to replace fire);• Value chains: recycling, valorization, commercialization of forest products.			
Outputs achieved			
Indicator		Target	Performance
Indicator 1	Ex-post remuneration of emission reductions (ER) from REDD (achieved)	At least 4 million tCO ₂ e in the funding period (2012 to 2015)	4.102 million tCO ₂ e
Indicator 2	Increase in number of SISA beneficiary families in programmes (overachieved)	8,000	12,315
Indicator 3	Implementation of at least two new sub-programmes (achieved)	2	2
Indicator 4	SISA's financial sustainability improved by 50% (achieved)	150	150
Indicator 5	400 additional persons trained in SISA system (overachieved)	400	574

Indicator 6	At least one additional cooperation agreement with a new SISA funding partner for ER remuneration (achieved)	1	1
Costs and timeliness			
<ul style="list-style-type: none"> Planned duration (4 years) delayed by one year due to the postponement of the remuneration in 2014 (due to delays in the commissioning of an independent audit); Delays due to institutional restructuring and delayed implementation of the indigenous component; The restructuring of the SISA institutions caused employee changes and delays. 			
Sustainability			
<ul style="list-style-type: none"> Financial sustainability of SISA was significantly improved by increasing the budget for SISA institutions. Institutional improvement of the SISA or REM structure and progress in the implementation of the REDD+ mechanism and the implementation of policies to reduce deforestation (land regulation, monitoring, and control. Establishment of an inter-institutional task force to control deforestation. An Executive Committee was created to better manage the implementation of benefit sharing. To avoid double counting, the remunerated ER were registered by Markit Group Limited and the remuneration registered in the national REDD+ Info Hub Brazil to ensure completeness and transparency. ERs were also registered on the international REDD+ Info Hub of the UNFCCC. 			
Further development of REDD+			
<ul style="list-style-type: none"> Measure established one of the first results-based payments systems based on robust carbon accounting. Acre's example had a structure-building effect in several directions, for example through the new REM cooperation with the state of Mato Grosso and the piloting of the new national REDD+ system. Progress in national REDD+ process confirms Brazil's role as an international REDD+ pioneer. As a worldwide pilot of the REDD+ Social and Environmental Safeguards (REDD+-SES) approach and two monitoring cycles, Acre has established itself as a REDD+ pioneer in this field. 			
Remaining challenges and risks			
<ul style="list-style-type: none"> Risk of rising deforestation rates due to counteracting political and economic development or the implementation of infrastructure measures. Change of government at the federal level in 2019 could lead to a change of course and personnel. Persistence of Brazil's economic and political crisis could undermine Acre's deforestation control and forest protection efforts. 			

Source: Authors, based on primary data.

5.2. “Reduction of Greenhouse Gases from Deforestation and Forest Degradation (REDD) in Central America and the Dominican Republic”

The information presented in Table 6 and in the following text is based on primary data (self-reporting of implementing organizations) as well as interviews with actors involved in the implementation of the measure (in particular Interview 14). In addition, insights from secondary literature are presented.

The measure on *Reduction of Greenhouse Gases from Deforestation and Forest Degradation (REDD) in Central America and the Dominican Republic* is one of the few regional measures in our overall sample and as such offers not only useful insights into coordination and coherence but also opportunities to learn about such broader cross-boundary efforts. When discussing the measure in more detail with stakeholders, the design and implementation was presented as building on the long-standing experience and presence of German development cooperation in Central America. When REDD+ started to evolve under the UNFCCC, BMZ commissioned the regional measure that initially aimed at assessing and comparing technical capacities of different countries, in particular in terms of data availability, as well as capacities needed for measuring carbon and performing forest inventories. As such, the measure has laid the groundwork for all subsequent efforts – including those of FCPF – at a time when the international REDD+ agenda had just started to develop. Later, when FCPF became more active and took over the (financial) lead of REDD+ efforts in the region, the measure focused on providing ongoing technical support. This support was key, considering that FCPF mainly focused on the financial part and had factually externalized several tasks (such as establishing baselines and MRV systems) to international consultants. The continuous technical back-up provided through the measure allowed partner countries to work with the elements provided or required by FCPF. In addition, the measure also covered issues beyond carbon finance, such as forest health and fire management.

Apart from that, the measure was rather flexible in adapting to new framework conditions, both with regard to political changes in partner countries and activities of other donors. When one country no longer needed support – either because REDD+ was no longer a priority or because FCPF, or other donors, scaled-up their engagement – resources were shifted to other countries. Similarly, it was possible to adjust the thematic scope of support in accordance with the national needs and priorities.

The measure is mentioned in Aguilar-Støen’s (2015) article on actors’ possibilities of participating in REDD+ processes in Colombia and Costa Rica. With regard to Indigenous Peoples, it discusses the so-called Integral Indigenous Development Associations (Asociación de Desarrollo Indígena Integral, ADIIs), a body claiming to represent Indigenous Peoples in REDD+ preparations. According to her research, “indigenous leaders challenge this, arguing that the ADIIs are official government bodies that represent and govern each indigenous territory by law, but do not necessarily represent or respect traditional ways of organization and are not accountable to Indigenous Peoples” (Aguilar-Støen, 2015, p. 15). Referring to expert workshops organized by GIZ and its counterpart CCAD, Aguilar-Støen further notes that “the legitimacy of ADIIs to represent Indigenous Peoples in Costa Rica has not been challenged by any actor participating in the readiness preparation; rather, the activities financed by the Regional REDD+ Programme GIZ/CCAD reinforce the position of ADIIs within the process” (Aguilar-Støen, 2015, p. 15). In line with this criticism, GIZ also evaluates the progress made through the measurement in this context as only partly achieved.

Table 6 Case Study: REDD in Central America and the Dominican Republic

Reduction of greenhouse gases from deforestation and forest degradation (REDD) in Central America and the Dominican Republic	
Commissioning entity	BMZ
Implementing organization	GIZ
Duration	2010 – 2017 (in sum) 2010 – 2013 (sub-measure reported here)
Budget	EUR 15.4 million (in sum) EUR 8.4 million (sub-measure reported here)
Aim	
The framework for the effective implementation of sustainable compensation mechanisms for the reduction of CO ₂ emissions from deforestation and forest degradation has been improved in the member states of the Central American Commission of Environment and Development (CCAD)	
Activities implemented	
<ul style="list-style-type: none"> • Inter-sectoral and multi-level policy dialogues • Establishment of regional platforms and expert groups, for example for MRV • Human capacity development: Workshops and trainings • Provision of goods and financial contributions • Pilot activities • Elaboration of national strategies 	
Outputs achieved	
<ul style="list-style-type: none"> • Indicator 1 partly achieved: joint position papers for the COP 17 in Durban, but no common position in international negotiations achieved. • Indicator 2 achieved: at least 4 countries have implemented 2 elements in their national REDD strategies. Readiness Preparation Proposals (R-PPs) prepared (BE, Dom. Rep.), approved (HN, NI, G, SLV), and implementation initiated (CR, PA). Initiation of pilot projects for compensation and benefit-sharing mechanisms. • Indicator 3 partly achieved: the effective participation of indigenous and local communities, small producers and women in the design of REDD compensation mechanisms level. • Indicator 4 achieved: regional and national policymakers steer the implementation of their REDD strategies at regional level and in 6 countries (aim: 4 countries) based on monitoring results. Regional database for forest resource monitoring and completion of MRV methodologies (e.g. installation of forest monitoring units). Collection and organization of key information and data on forest resources and carbon calculation. 	
Coordination and harmonization	
<ul style="list-style-type: none"> • CCAD aggregates all donor forest-related programmes (including this measure) under the Regional Forest Programme PER-FOR, thereby ensuring its coherence • Measure has contributed to the inter- and intra-sectoral dialogue of the countries and regional cooperation • The desired harmonization of forest policies of the CCAD-countries has still huge deficits within and between the countries 	
Costs and timeliness	
<ul style="list-style-type: none"> • Time delays due to specific framework conditions • Budget increase by EUR 2,370,000 (as compared to offer) used for MRV studies and assessments for several countries, institutional support, public relations and purchase of goods 	

Sustainability

- Counterpart CCAD is still financially weak and dependent on external funding
- Monitoring units planned or established in all countries, but personnel and financial capacity not ensured
- Success depends heavily on strengthening of institutional partners and on follow-up by bilateral projects

Source: Authors, based on primary data

5.3. “Protection of Forests and the Climate (REDD+) Colombia”

The information presented in Table 7 and in the following text is based on primary data (self-reporting of implementing organizations) as well as interviews with actors involved in the implementation of the measure (in particular Interview 11).

Among the measures investigated, the *Protection of Forests and the Climate (REDD+)* measure in Colombia features some of the most difficult framework conditions that development cooperation efforts may face – namely that of armed conflict and a respectively disruptive peace process. According to the informants, 5 of 6 jurisdictions (states) in which activities took place were categorized as “high risk” during the implementation period. Together with the United Nations Department of Safety and Security (UNDSS), a security concept had to be developed to monitor the implementation and increase the security of staff members. The overall situation, the constant need to analyse and communicate framework conditions as well as the accompanying discussions with various stakeholders – including the Colombian government, actors in regions, BMZ as well as the German embassy – were described as one of the key challenges faced by implementing actors. Furthermore, it was explained that the need for a budget increase was visible and therefore planned from the very beginning. A key factor was the coordination with other donors. When the measure started, other actors – in particular UN-REDD – were still in an early phase of planning their input. It was only in 2014 that responsibilities and activities were coordinated, which led to an important shift: rather than establishing safeguard systems at regional level, the German measure concentrated its efforts on establishing the safeguarding system at national level (originally thought to have been done by UN-REDD). Eventually, forces were joined and both sides contributed to establishing and monitoring safeguard systems at national and regional level.

When asked about key lessons learnt, the usefulness of multi-level approaches was particularly stressed: these not only supported the safeguarding process at the national (and thus theoretical) level but were also implemented in regional and local pilots. The experiences made on the ground were then fed back into the national process. Clearly, this required a close coordination with actors at all levels as well as with other donors. The importance of working with technical staff at ministries, rather than focusing on partners at higher political levels only, was stressed: while personnel changes in ministries usually have negative impacts on the continuity of the process (because a point of contact may be lacking for several weeks), the relationship with technical staff (who either remained in their position or at least were still active in the broader REDD+ context after political changes) ensured a certain degree of planning security.

Table 7 Case Study: REDD+ in Colombia

Protection of Forests and the Climate (REDD+) in Colombia	
Commissioning entity	BMZ
Implementing organization	GIZ
Duration	2013 – 2019
Budget	8.3 million EUR
Aim	
The development and implementation processes of the national REDD+ strategy follow an inter-sectoral approach, according to the criteria of the Forest Carbon Partnership Facility, which takes into account regional structures as well as social and environmental standards	
Activities implemented	
<ul style="list-style-type: none"> • Human capacity development formats and institutional consultancy services • Set-up of the national safeguards system • Development of the national REDD+ Strategy • Implementation of 8 pilot projects 	
Outputs achieved	
<ul style="list-style-type: none"> • Indicator 1 achieved: three agreements between Ministry of Environment and other relevant actors have been implemented, and improve coordination and cooperation within the framework of REDD+ policy. • Indicator 2 overachieved: in 6 departments (aim: 4), implementation structures developed in pilot measures are being used to reduce deforestation (e.g. forest round table meetings). • Indicator 3 achieved: gender-differentiated social /environmental safeguards system developed with Ministry of Environment. The National Safeguard System developed and piloted in Amazonia / the Pacific Coast. • Indicator 4 overachieved: 75% (aim: 50%) of recommendations from 6 studies on drivers of deforestation implemented in departments in national REDD + strategy as policies, strategies or programmes. • Indicator 5 achieved: Ministry of Environment produces two reports/year on the progress of the development of the national REDD+ strategy. 	
Specific framework conditions	
<ul style="list-style-type: none"> • Armed conflicts • Ongoing peace process • Remote rural areas not being controlled by state • Power asymmetries between sector ministries • Government changes • Illegal drug cultivation • Security situation: two pilot projects not completed 	
Costs and timeliness	
<ul style="list-style-type: none"> • Project originally planned to run from 2013 to 2016, but has been prolonged to 2019. • Budget increase from EUR 3 to 8 million: initial budget insufficient to work on long-term strategies, with significant impact due to complex actor constellation and geographical extension. Increased budget was used to broaden and deepen activities at both regional and local level (e.g. including two further deforestation hotspots and accompanying more closely the implementation of the safeguards system). 	

Sustainability

- Two pilot projects have been selected for follow-up funding and will be extended by national programmes.
- Financing opportunities for the implementation of sustainable land-use measures for the local population are improved.
- Capacity Development Measures systematically enabled national and regional partner institutions to apply methods and instruments for REDD+, such as monitoring, social and ecological standards, and surveys on forest condition.
- Visión Amazonia is continuing various pilot activities in Caquetá and Guaviare.
- Private companies have concluded long-term purchase agreements at fixed prices with the producers of the Asafruit in Putumayo and the Cacaynut in Meta and Guaviare, ensuring economic sustainability.
- The political weight assigned to mining carries the risk that a major driver of deforestation will be strengthened. Compared to the mining sector, the environmental sector is of secondary importance and the role of the Ministry of the Environment is still weak.
- New drug policy “way forward” (Ruta Futuro) could lead to a spiral of violence, which in turn could negatively impact on living conditions and security in many rural areas and thus on voluntary measures by the population to reduce deforestation.
- The unclear situation of the armed conflict makes an assessment of the future situation very difficult.

Source: Authors, based on primary data

5.4. “Climate-related Modernization of National Forest Policy and Piloting REDD Measures in the Philippines”

The information presented in Table 8 and in the following text is based on primary data (self-reporting of implementing organizations), and interviews with actors involved in the implementation of the measure (in particular Interview 15).

Climate-related Modernization of National Forest Policy and Piloting REDD Measures in the Philippines is one of the measures that is financed through IKI and one of the few with quantified emission reductions targets and achievements. In the interviews, it was stressed that several factors positively influenced the progress and performance of activities: first, the successful integration of all relevant stakeholders, in particular Indigenous communities and civil society organizations but also governors and mayors; second, the willingness of the national government to participate in REDD+ and include it in the national climate strategy; third, the long-standing experience and various backgrounds of staff involved (foresters, economists, community organizers); fourth, a multi-sectoral approach that took into account framework conditions outside the forest sector (governance, energy, agriculture); fifth, the cooperation with a domestic energy company, which further increased public attention and awareness. The measure was presented as having an exceptionally well elaborated public relations approach.

Another key issue discussed was donor coordination. The implementing organization aimed at proactively engaging with other donors and implementers (UN-REDD, USAID) as well as NGOs implementing REDD+ activities for the voluntary market (WWF, Flora & Fauna), for instance through joint workshops. Notably, donor coordination was facilitated by a newly established REDD+ entity within the forest department of the Ministry of Environment. However, coordination did not always work as planned, partly because donors competed over access to and availability of (a limited number of) local partners.

A key lesson learnt is that it takes time to change consolidated structures and systems, in particular with regard to corruption. For instance, the measure was able to promote the regulation of tenure rights at local level and prevent corruption within its afforestation component; however, there was no up-scaling effect to the national level.

Table 8 Case Study: National forest policy and REDD in the Philippines

Climate-related modernization of national forest policy and piloting REDD measures in the Philippines	
Commissioning entity	BMU
Implementing organization	GIZ
Duration	2009 – 2013
Budget	EUR 2.8 million
Aim	
The Philippine Ministry of the Environment, local authorities and the population are using an improved climate-relevant forestry policy to reduce greenhouse gases and preserve forests and their biodiversity.	
Activities implemented	
The Philippine Ministry of the Environment, local authorities and the population are using an improved climate-relevant forestry policy to reduce greenhouse gases and preserve forests and their biodiversity.	
Outputs achieved	
<ul style="list-style-type: none"> Indicator 1 (achieved, 100%): on initiative of project, Department of Environment and Natural Resources (DENR) has not approved the conversion of 3,000 ha of forests (approx. 1.1 MtCO₂e); by designating and securing protection forests in the project area, 101 ha of forest loss will be avoided annually from 2012 onwards (i.e. annual emission reduction of 56,028 tCO₂e compared to baseline). Indicator 2 (partly achieved, 73%): 2,178 ha of forest and agroforestry areas created in the form of forest rehabilitation (1,045 ha), including rattan as income-relevant enrichment plantation, afforestation (491 ha), and establishment of agroforestry systems (642 ha) (annual binding of 18,745 tCO₂e). Indicator 3 (achieved, 100%): contracts for forest protection concluded with rural districts and forest user groups, covering a natural forest area of 17,120 ha (ensured by the establishment of forest guard teams). Indicator 4 (achieved, 100%): forest protection committees and 11 forest protection teams with forest guards set up in four out of five local authorities. 	
Costs and timeliness	
<ul style="list-style-type: none"> Start and implementation delayed several times (two modification offers required to extend duration) Originally planned budget increased due to specific framework conditions 	
Awareness raising	
<ul style="list-style-type: none"> Effective public relations work (part-time public relations specialist) Broad alliances forged with media <ul style="list-style-type: none"> Resulted in broad support, including from the “REDD sceptics” Raised public awareness of forest, climate and species conservation Networking with all relevant actors, promoting exchange beyond the national level 	
Sustainability	
<ul style="list-style-type: none"> Forest and nature conservation contracts include permanent financing through local authority budgets Further sustainable income improvements expected from yields from agroforestry systems Conceptual aspects implementation of REDD+ implementation incorporated into forest land-use planning (FLUP) Environmental offices (MENROs) at local authorities firmly established, with budgets to promote forest conservation and development in the long term Through systematic capacity building and awareness raising, critical mass has been created that will carry REDD+ beyond the end of measure 	

- Measure strengthened the partners' capabilities for the international negotiations on REDD+

Further development of REDD+ at international level

- Measure tested the instrument of contractual nature conservation with local authorities and local forest users
- Measure implemented forest inventory method that includes biodiversity and forest carbon
- Measure developed a concept for a sub-national MRV system for REDD+

Source: Authors, based on primary data

5.5. "Piloting Nested REDD+ Accounting in Colombia"

The information presented in Table 9 and in the following text is based on primary data (self-reporting of implementing organizations), and interviews with actors involved in the implementation of the measure (in particular Interviews 11, 16 and 20).

In response to challenging framework conditions in partnering countries, such as policy partners at national or sub-national level, that are not always perfectly cooperative or are in situations of conflict, the use of nested approaches to REDD+ can be a promising way forward. Unlike many other measures the IKI project *Piloting Nested REDD+ Accounting in Colombia* was implemented, an international NGO/think tank (Winrock International). When dealing with national decision-makers, who seemed barely interested in the measure, actors involved in the implementation of the measure initially found it hard to determine what exactly the interests and priorities of the national government were and how the measure could be supportive. The measure had to adapt its activities and inputs to where they were deemed to be most useful and to add most value. Vis-à-vis the lack of interest by the national government, the implementing organization found its niche "by removing itself from the highest level and working with the technicians from the second and third level, thereby providing technical and policy support from the bottom up". It was further explained that Colombia has a very high capacity and well-trained as well as paid staff. This means that "they can do a lot themselves – Colombia is not one of the countries that just wants consultants to come in and do everything for them". This viewpoint was confirmed in other interviews, which also pointed to the fact that numerous donors are actively engaged in Colombia. It was added that all of them seek to work with the national government, which is not necessarily the most efficient way: "At the national level there is much competition on topics like safeguards, we are all working on it, and it is difficult because you have to reach agreement between many actors."

Once the implementing organization established a solid relationship with technical staff at second and third level, the measure was implemented as planned. Built on this relationship, the measure could respond to the government's needs more effectively, for instance, when creating the REDD+ register and building technical capacity. As a consequence, the technical components of the measure are seen as "self-sustaining". When asked about key lessons learnt, it was noted that donors and implementing organizations must be better prepared to be in such a "self-determined" country: "You need to have pragmatic view and you need to be flexible and find out where value can be added."

Table 9 Case Study: Nested REDD+ Accounting in Colombia

Piloting Nested REDD+ Accounting in Colombia	
Commissioning entity	BMU
Implementing organization	Winrock International
Duration	2013 – 2017
Budget	1.3 million EUR
Aims	
<ul style="list-style-type: none"> • Conducting a first pilot of nested REDD+ and build capacity in Colombia for REDD+ implementation at national and subnational levels • Strengthening REDD+ in national policies and creating systems of standards/regulations, and capacity building of (sub)national governments and private industry to participate in REDD+ • Analysing drivers and creating transparency 	
Activities implemented	
<ul style="list-style-type: none"> • Prepare feasibility report to identify priority opportunities for REDD+ implementation • Develop subnational RLs • Offer technical support to Colombia on the development of FREL/FRLs • Improve understanding of drivers • Provide on-demand support to government and the Ministry of Environment and Sustainable Development (MADS) on regulatory aspects of implementing a nested REDD+ system • Develop capacities, standards, methods, and procedures for sub-national monitoring and reporting 	
Outputs achieved	
<ul style="list-style-type: none"> • Output 1: National pre-feasibility assessment to identify areas for priority subnational RLs (achieved) • Output 2: Review subnational RLs to test results-based accounting / understand drivers (achieved) • Output 3: Options, implications and methods for nesting of projects (achieved) • Output 4: Establish subnational monitoring and reporting scheme (achieved) • Output 5: Support development of national and/or subnational policy to implement nesting (achieved) • Output 6: Develop online national REDD+ register (achieved) • Output 7: Support development of national positions to UNFCCC on REDD+ (achieved), also: providing advice on negotiations under International Civil Aviation Organization / Carbon Offsetting and Reduction Scheme for International Aviation (ICAO/CORSIA) and regional positions on REDD+ and article 6 for REDD+ financing • Output 8: Build capacity within Colombia on nesting policy (achieved) • Output 9: Develop training material and guidebooks (achieved) • Output 10: Providing ongoing technical support (achieved) 	
Costs and timeliness	
<ul style="list-style-type: none"> • Slow implementation mode due to slow decision-making by government as well as unclear political goals and priorities • Long process of building trust relationships and promoting dialogue within MADS (communications went un-responded) • Heavy delays and changing scope of activities since MADS requested modifications • Changes in government and MADS created inefficiencies and changes in perspective (decision to not implement nested REDD+) • IKI granted extension (once coordination barrier was broken, project implementation started moving ahead) 	

Sustainability

- MADS will use Excel tool developed to prioritize areas for reforestation and forest restoration
- Institute of Hydrology, Meteorology and Environmental Studies (IDEAM) will use report to improve efforts to map deforestation
- Remaining risks: lack of institutional capacities (technical and legal), REDD+ activities have not yet been harmonized with national or regional RLs, inherent disconnect between national and subnational government entities

Source: Authors, based on primary data

6. LIMITATIONS

As mentioned in different parts of the report, this study faces methodological limitations that need to be taken into account when interpreting the findings. The available resources allowed for the analysis of primary data, the generation and analysis of 35 interviews, and a review of secondary literature. Regarding the primary data, it must be stressed that it is a form of self-reporting. Organizational research has shown that self-reporting is inherently biased, as responses and descriptions are influenced by “social desirability” and “impression management” (Zerbe and Paulhus, 1987; Campbell et al., 2013). The same is true for interviewees who always have a subjective view on a certain topic or incident. It must also be noted that most of the interviewees were German or international actors. To validly assess certain issues, it would have been necessary to go into the field and speak with a much broader variety of stakeholders, in particular national and local stakeholders in partner countries. In the following, we highlight three issues that could not be properly assessed due to the limited availability of conclusive, systematic, or detailed field data.

Input–output ratio: Assessing the input–output ratio of a measure requires a detailed knowledge on the composition of costs as well as the specific framework conditions under which activities and resources have been implemented. For instance, the establishment of a national forest inventory might require more time and budget in country X than in country Y because of different circumstances (e.g. with regard to terrain) and national capacities (e.g. with regard to data collection and processing) (Romijn et al., 2012). If we want to make a statement on whether or not too much budget has been spent in order to achieve a certain output, such information must be considered. In addition, assessing the input–output ratio of a measure and comparing it to another is complicated by the fact that in the case of REDD+, inputs and outputs differ a lot. It adds little value to either the quality of the study at hand or the learning of implementing countries to, for instance, compare the budget spent for advisory services on the inclusion of Indigenous Peoples with that spent on a pilot on payments for reduced emissions in practice.

Input–output ratio (avoided deforestation): The few activities that actually led to avoided emissions – for example, establishment of protected areas and eco-corridors, changing government plans, establishment of land-use plans, reducing illegal logging by providing alternative income possibilities, reforestation and afforestation efforts, etc. – again differ significantly from each other, and so do the costs associated with them. However, it must be assumed that the different activities were chosen in line with different framework conditions. Without more knowledge of such conditions – which can only be gathered through a more comprehensive analysis and based on data from field research – we cannot judge comprehensively if the costs and benefits of achieving these emission reductions have been adequate.

From outputs to outcomes: German development cooperation on REDD+ predominantly focuses on readiness measures that are key to eventually implementing REDD+ at national level. For this reason, they are also explicitly recognized by the UNFCCC as an integral part of the REDD+ process. Yet most countries are still not ready, and it remains to be seen whether the outputs generated, including the demonstration activities, will eventually contribute to and translate into reduced emissions at broader, national level. This, however, may be hard to evaluate even 10 years from now, considering that today many countries seem still stuck in readiness and demonstration phases. Beyond a supportive narrative on the role of forests for development, being able to see such progress may also depend on powerful interests in the countries (cf. also Angelsen et al., 2018b, 2018c), which however is beyond the scope of this analysis.

On a more fundamental level we would like to raise the challenge of analysing all sorts of REDD+ measures with just one framework for evaluating ODA. In this study we chose the OECD DAC evaluation criteria as a reference for our analysis. As an innovative, incentive-based instrument implemented across two phases and through a multiplicity of activities at different levels and different approaches, its design, in our view, deviates significantly from classical development cooperation. The built-in flexibility for spending RBF in the countries furthers this limitation. Accordingly, the study does not claim to be a comprehensive analysis of the German contribution of REDD+. Rather, it is an analysis that attempts to serve first as a more systematic stock-taking exercise across the varied activities of German REDD+ support, with the intention of providing first useful insights as a basis for future discussions on the design and implementation of REDD+. For a fully fleshed evaluation of bilateral REDD+ measures that allows us to gain comprehensive and in-depth insights into the varied mechanisms of change, from outputs to outcomes, or regarding the appropriateness of inputs (vs. outputs) etc., field research is indispensable.

7. DISCUSSION

The initial expectations of REDD+ were that it would lead to “a rapid, cheap and lasting reduction of emissions from tropical deforestation and forest degradation” (Angelsen et al., 2018c, p. 204). After 10 years of (not only German) support to REDD+ in many countries and across the three (or mostly two) phases, doubts pertain as to whether the assumed qualities of the instrument have materialized in practice. As researchers maintain, however, for analysing REDD+ measures we need to take into account that “REDD+ is still in an early phase of implementation, and one cannot expect its performance – the delivering of its perceived potential – to have fully materialized yet” (Arts et al., 2019, p. 837).

In most partner countries, REDD+ has hardly transcended the inception or readiness phases (both formally and practically). Only some countries, like Brazil, have undertaken pilot efforts at sub-national level (phase 2) or tested RBP at provincial or national level (e.g. through REM). While such pilots are important for testing REDD+ elements under realistic field conditions, and for stimulating learning processes, they do not necessarily lead to significant emission reductions at national scale, and may be limited in addressing problems that require a more holistic perspective, such as leakage or drivers of deforestation.

This synthesis study aimed to bring together the existing knowledge about the performance and impact of German REDD+ measures from 2008 to 2018. To this end, and built on primary and secondary data, we analysed 30 German REDD+ measures regarding the five OECD DAC criteria, namely relevance, effectiveness, efficiency, sustainability, and overarching (development) impact. The analysis has confirmed that the process of laying the groundwork has been more labour, cost, time, and skill intensive than originally expected, even for supposed early movers, not least because of pertaining governance issues. Despite the significant progress made in monitoring and accounting in some countries, the political economy of land use and the respectively powerful drivers of deforestation remain not satisfactorily addressed by the measures. Considering the complexity of land-use-related issues across multiple sectors, layers, and stakeholder groups, the possibility of exerting a meaningful influence may be too limited for technical and financial development cooperation alone.

According to our analysis, and concerning the relevance of German REDD+ measures, especially those implemented through GIZ and, to a lesser extent, through KfW, organizations were able to draw on long-standing and direct relationships in partner countries. This often increased the relevance of measures because it allowed the needs and desires of partner countries to be taken into consideration throughout the implementation process. However, relationships do not exist equally for all kinds of actors and often depend on personal capacities. Closer links to the private sector as well as ministries other than the Ministry of Environment are often lacking, or insufficient. These actors may, however, be critical in addressing the (agro)-industrial drivers of deforestation that are often “deeply entwined with the political economy of development [and] speak to core strategic concerns of economic planners within government” (Dwyer and Ingalls, 2015, p. 30). In this respect, the German contribution to REDD+ largely reflects the overall experience shared in many partner countries.

Regarding its underlying ToC, REDD+ has changed significantly in terms of its scope and implementation over the last decade. In addition to the original interpretation of the REDD+ instrument as a climate-change-mitigation approach in the forest sector, a broader approach for a multi-objective framework has evolved, adding development, biodiversity, governance, and adaptation considerations (Angelsen, 2017; Martius et al., 2018; Pistorius, 2014). In this context, the consideration of genuinely high, and potentially contradictory, expectations of, and political interests of actors in, the instrument may be key – not only within partner countries but also on the part of and in relation to donors. For some stakeholders, REDD+ is a compensation-based mitigation approach with a strong focus on carbon and quantified emission reductions. The best way to protect carbon stored in forests, in such a view, is by ensuring that forests remain intact, for instance by designating protected areas. By contrast, other stakeholders advance the idea of addressing key development issues with REDD+, such as rural livelihoods, poverty, and good governance. These notions are not mutually exclusive, and the more recent work on and experience with REDD+ has surely advanced the idea that activities that support the sustainable management and use of forests – benefitting the people dependent upon forest resources for their livelihood – may well support the protection of forests, at least to a certain extent. Despite the inherent trade-offs, this more integrated approach helps address one key (local) driver of deforestation.

Still, this prompts the question of whether such extended ToC poses an indispensable thematic shift towards addressing a key underlying cause of deforestation and forest degradation as, for instance, found in local livelihood challenges or weak governance arrangements, or whether it rather constitutes an “acute case of ‘objectives overload’” (Martius et al, 2018, p. 28) or of “falling back” into business-as-usual development cooperation (Interview 32). When measures contribute to outcomes that fall under the broader scope of improved forest governance or even sustainable development, such outcomes will be difficult to judge regarding their actual impact on deforestation or degradation trends in recipient countries. Furthermore, the existence of two alternative understandings and respective ToCs undermines the legitimacy of the REDD+ instrument in partner countries and at home. While German institutions and the general public lament the lack of “bang for the buck” (halted deforestation), recipient countries maintain that there was no “buck for the bang” (money for governance-related efforts). To a broad extent this is grounded in lengthy readiness processes, for which complicated and parallel bi- and multilateral funding architectures within most countries should be held accountable. Overall, readiness finance seems more abundant than RBP and it may not be perfectly motivating for countries to speed up. In order to avoid REDD+ readiness becoming a never-ending story, innovative approaches to financing the achievement of political and technical milestones in preparatory phases may be considered in the ToC to incentivize progress toward phase 3 and actual emission reductions.

Regarding the overall effectiveness of REDD+ measures, our analysis suggests that the decade-long German engagement in REDD+, and forest conservation more generally, has left significant traces in the partner countries – particularly regarding the renewed attention to the matters of Indigenous Peoples and rural communities, and the notable improvement in the technical and practical capacities for forest management, monitoring, and accounting. Although German measures have typically not (yet) accomplished an actual emissions reduction through reduced deforestation or forest degradation, forests, according to our analysis have received unprecedented attention in most supported countries. Targeted at establishing, more or less successfully, the prerequisites for (a future) national REDD+ instrument under the UNFCCC, most outputs of German measures rather fall under the broader scope of improved forest governance and (sustainable) development, than under climate-change mitigation. The reported increasingly trustful relationships with national counterparts in partner countries are grounded in often decade-long technical cooperation provided by GIZ. Although coordination between German actors seems to work rather well in most cases, it has not always been possible to avoid overlaps and duplications, especially with other donors. Donor coordination has considerably increased in recent years – with GNU becoming the nucleus of REDD+ finance and knowledge exchange on lessons learnt within and beyond countries. Still, there is considerable room for improvement, in particular with regard to divergent requirements and redundant processes, especially in countries of heightened interest.

Our analysis has also indicated that transitioning to a fully functioning RBP instrument (phase 3), REDD+ will need more time, resources, effort, and financial support. Furthermore, there is considerable room for improvement in terms of transparency and learning. For instance, measures financed by BMZ draw on a different reporting and evaluation framework than those financed via IKI. This hampers reflexive lesson-learning and gaining a clearer understanding of what Germany is actually doing on REDD+. The latter is of key importance, particularly in terms of dealing more proactively with current criticism and expectation management in the partner and donor countries. However, the German evaluation approach by ministries and implementing organizations is not always perfectly suited to cross-institutional lesson-learning, for awareness-raising, or for accounting for tax expenditure (Schroeder et al., 2020). Limited and broadly inconclusive information on efficiency, for instance, does not allow definite statements about how adequate the relationship between costs and benefits has been for each measure.

In terms of sustainability, the unexpectedly high efforts (labour, cost, and skills) that had to be put into German REDD+ support, in combination with the nature of REDD+ as an incentive-based approach puts the continuity of measures at risk after termination – unless human and financial resources are further secured. At a fundamental level, sustainability seems largely to depend on political interests and governance conditions in partner countries, and German implementing organizations have often found that benefits could not be secured after funding has ended if the partners showed no interest in doing so. It almost seems

as though the (forest) governance quality was inversely proportional to the country's importance to the global impact of REDD+. For instance, countries like Brazil, Indonesia, or the Democratic Republic of Congo host a large share of the remaining natural rainforests, which is why they are among the most important countries for conservation of forest and carbon stock. At the same time, and despite timely successes, such as the moratoria in Indonesia and Brazil or the establishment of the Amazon Fund, the three countries still face significant forest governance challenges that jeopardize the permanence of the support (and existing project results) in place. While in Indonesia, for instance, important steps were taken toward more stakeholder participation at local level, REDD+ implementation in practice – in line with one general key insight of this study – was not broadly relevant to the development agendas of political elites and the private sector, which tend to pursue economic development rather than emission reductions (Casse et al., 2019). This prompts the question of how to deal with countries that show limited progress (like Indonesia), corrupted governance structures (like the Democratic Republic of Congo) or fall back into old habits when political leadership shifts (Brazil).

One option may be to withdraw support from such “bad governments” at least in part – as recently seen with Norway and Germany suspending Amazon Fund pledges in 2019. But only focusing REDD+ support on countries where political and governance conditions, political will, or the network of partners (NGOs, private sector) are sufficient does not seem an ideal option for many donors, and despite the detrimental political conditions it would be careless to squander efforts to conserve the biggest terrestrial reservoirs of carbon, which also cover the Earth's most significant biodiversity hotspots and are home to hundreds of millions of forest-dependent people. Clearly, it is important to avoid tapping into regrets over sunk costs and to develop clear strategies for dealing with bad governance and unwilling partners. One concrete strategy may be to ‘hibernate’ this engagement and to divert this to private actors or NGOs instead. However, this would undermine the idea of a nationally consistent REDD+ framework, which, for instance, ensures that the Cancún safeguards are addressed across jurisdictions. Another alternative is to draw on the ‘underground’ experiences of political foundations or NGOs. Proactively embracing the low likelihood for success when working with reluctant political elites by having a reduced but clear focus on strengthening the implementation of existing policies may be another approach for the time being. Learning from failure, and sharing lessons among different programmes, partner organizations, or countries may be useful for this sort of challenge and preferable to letting go. Eventually, real and long-lasting impacts will also depend on whether countries succeed in effectively addressing powerful drivers of forest loss and land-use conversion that stem mostly from agricultural production. In this respect, donor countries do, in fact, have a powerful scope of influence – by working on the key value chains from outside the respective country – be it through working on consumer behaviour, on the scope for subsidies, or with key intermediary actors (like retailers).

The future finance of REDD+ is clearly one of the key issues to be addressed for the future success of the instrument. As mentioned several times, REDD+ activities are still largely financed via ODA budgets and not through international carbon markets or private sources. Although the volume of emission reductions traded on the voluntary carbon market has increased, public funds remain the primary source of REDD+ finance across all three phases, through results-based payment mechanisms such as REM (Lujan and Silva-Chávez, 2018). Current market demand for REDD+ credits only exists in voluntary markets where carbon prices remain historically low. In particular, the interest in purchasing ERs from the Agriculture, Forestry, and Other Land Use (AFOLU) sector has recently gained traction (see *Forest Trends: Ecosystem Marketplace*, 2019). In light of the recent boost through public protests and increasing political awareness, this trend is likely to further develop over time.

However, the inclusion of forest carbon credits in offsetting schemes remains a challenge with respect to their environmental integrity in areas such as additionality, baseline setting, quantification of emission reductions, permanence, and leakage (Chagas et al., 2019). In light of these limitations and pending implementation rules for the Paris Financial Mechanisms, REDD+ emission reductions in countries will likely continue to mainly qualify for payments via public funding channels such as the GCF. Nonetheless, offsetting systems outside the UNFCCC, such as CORSIA, may play a future role, and it seems very likely that credits generated through REDD+ activities will be included in the voluntary scheme. Given the significant demand for credits that CORSIA is expected to create in the international civil aviation sector, this could clearly be a

game changer for financing REDD+. At the same time, though, concerns pertain regarding double-counting and also in relation to more moral considerations, which consider offsetting of a false solution that “does not lead to emission reductions but merely shifts emissions from one sector to another and, at best, is a zero-sum game” (Friends of the Earth, 2016, p. 2).

In this context, we reiterate the increasing disappointment by both national and local stakeholders who complain that the efforts invested in the readiness phase and the corresponding politico-technical framework (e.g. the development of a National REDD+ or Action Plan as well as MRV and inventory systems) have not (yet) been financially rewarded. This is particularly true for stakeholders in countries that are – often for years and involving quite complex paperwork – preparing for and in negotiations over Emission Reduction Payment Agreements under the FCPF Carbon Fund but have so far not seen a single payment. Playing into this frustration, prices per tonne of CO₂ appear (still) too low to compensate for the opportunity costs of foregone alternative land uses (e.g. cash crops such as oil palm or soy) or to incentivize the foreseen substantial transformation of policies and economies.

Powerful drivers of deforestation still often undermine ongoing efforts to halt deforestation, and may spur national or cross-boundary leakage. Accordingly, performance-based payments, such as under REM, while signalling a new recognition for forests, still only serve as a ‘cherry on the cake’, whereas the ‘cake’ in this image refers to the many more ingredients needed to foster sustainable forest management strategy, which recognizes the non-monetary services of forests and is able to address powerful drivers of deforestation and forest degradation. It also remains unclear how the low carbon prices in the (oversupplied) carbon markets of the last decade have helped in “testing the possibilities for forest governance in a carbon-limited world” (Dwyer and Ingalls, 2015). This is even more a missed opportunity, as the current fund-based approach allows experimentation with different, possibly more context-sensitive, (future) price scenarios, which would enable partners to validate (or falsify) the assumed transformative power of RBPs in practice – on a small-scale for the time being.

8. IMPLICATIONS

The year 2020 was expected to be a landmark year for halting deforestation, both in terms of the SDGs (15.2) and the New York Declaration on Forests (NYDF) (goal 2). However, the situation at the beginning of this year suggests that the efforts of both governments and companies were, and still are, insufficient to address the magnitude of the problem (FAO, n.d.; NYDF, 2019). The synthesis study at hand offers substantial insights into the progress and limitations of Germany's contribution to REDD+.

The application of the OECD DAC evaluation criteria by the synthesis study has resulted in several implications for donors and implementing organizations. By pointing to key challenges and lessons learnt, the study has provided perspectives for actors seeking to further develop and improve the REDD+ framework, as well as recommendations of specific measures. Applying these implications could (a) strengthen current and future REDD+ programming and implementation and (b) contribute to a better public understanding of the REDD+ activities by German actors and related results and impacts. With a more proactive approach to transparency (in particular with regard to concepts, underlying assumptions, and experiences with REDD+), actors could, for instance, address general misconceptions about REDD+ which underlie many of the identified challenges. The different implications are not equally relevant for all actors involved in German REDD+ measures. We differentiate between implications that apply to (a) the *political and strategic level* mainly and are therefore directed towards the federal ministries (in particular BMZ and BMU, among others) as well as (b) the *implementation level* and are more relevant to the implementing organizations (in particular GIZ and KfW, but also other organizations, such as those implementing IKI measures).

Specifically, our results point to the following implications:

1. **Implications that require the revision of REDD+ strategies and portfolios**, taking into account key lessons learnt. Actors may focus on various aspects:
 - a. Update key objectives and priorities, taking into account the political economy of development agendas in partner countries, as well as the powerful drivers of deforestation, both within and outside partner countries (from producer to consumer). [political / strategic level]
 - b. Promote cross-sectoral approaches in REDD+ implementation across all ministries that better align REDD+ with other efforts supported by Germany, such as strategies on deforestation-free supply chains. [political / strategic level]
 - c. Make private and finance sector actors more responsible for sustainable land-use practices and accountable as key agents of deforestation, and ideally functioning as change agents. This could either imply developing new and innovative measures in the German REDD+ portfolio that explicitly focus on new forms of inter-sectoral integration in land-use planning or policy making, or truly collaborative cross-sectoral dialogue and planning. This requires keeping in mind pertaining power imbalances and the need to change not only narratives but mind-sets and political will. [implementation level]
 - d. Strengthen the collaboration and cooperation between key target groups in partner countries including ministries and agencies working on agriculture, finance, economic development, infrastructure, and mining, among others. In this context, civil society actors should be institutionally strengthened. [implementation level]
 - e. Consolidate the international coordination with other donors and institutions, by discussing higher carbon prices and REDD+ budgets, or how to deal with countries with particularly bad governance but high relevance for forest conservation. [political / strategic level]
 - f. For the readiness phase, consider experimenting with RBP for political milestones to spur progress. [implementation level]
 - g. Refocus themes and regions of the REDD+ support and portfolio, especially considering a more efficient use of funds, by refraining from piling up on the activities of other donors in particularly promising themes, countries, or districts, for example; proactively identify persisting thematic and regional blind spots for support, and coordinate implementation accordingly. [political / strategic level]

2. Implications for coordination:

- a. Intensify the existing inter-ministerial coordination and consultation in Germany beyond the formal consultation processes. [political / strategic level]
- b. Utilize the different core competencies, experience, and financing opportunities, while avoiding inefficiencies and trade-offs; such coordination should explicitly also extend beyond BMZ, BMU, and BMEL, e.g. BMF, considering the trade-related drivers of deforestation in Germany. [political / strategic level]

3. Implications for communication and political discourse: bring deforestation to the front of political discussions around global (agriculture) supply chains, particularly on commodities known for driving deforestation (i.e. soy, cattle, palm oil, timber, pulp and paper). Policy reform in Germany (and Europe) will have a major role to play to address perverse incentives in the agricultural sector (e.g. subsidies) or consumption-related pull factors for deforestation. [political / strategic level]

4. Implications for transparency and learning: the opportunity and already existing willingness to approach transparency and learning more systematically:

- a. Establish a more coherent and transparent reporting system, for instance a joint database, covering information on all German REDD+ measures with comparable key parameters and lessons learnt from implementation. Such a system would allow a better understanding (and revision) of German contributions and impact, while increasing the coherence between measures of different organizations. Accompanying research projects may enhance the quality and transparency of measures and support a systematic and reflexive learning practice. [political / strategic & implementation levels]
- b. Another opportunity lies in a more proactive approach to communication and exchange with the interested public around German REDD+ support. Coordinated by lead ministries and enacted by implementing organizations, this approach could help to avoid misconceptions and enhance an open debate about measures, objectives, and achievements. [political / strategic & implementation levels]

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10. ANNEX

Table 10 List of interviews

Actor group: Representatives of three ministries (BMEL, BMZ, BMU) and actors involved in the design, funding and implementation of German REDD+ measures (GIZ, KfW, NGOs that have implemented IKI projects and actors in partner countries)	Date	Actor group: Actors involved in the design, funding and implementation of measures by other donors and initiatives (bi- and multilateral) and representatives of intergovernmental organizations working on forest issues	Date
Interview 1	Q4 2019	Interview 22	Q1 2020
Interview 2	Q4 2019	Interview 23	Q1 2020
Interview 3	Q4 2019	Interview 24	Q1 2020
Interview 4	Q4 2019	Interview 25	Q4 2019
Interview 5	Q4 2019	Interview 26	Q1 2020
Interview 6	Q4 2019	Interview 27	Q4 2019
Interview 7	Q4 2019	Interview 28	Q4 2019
Interview 8	Q1 2020	Actor group: Academic experts and representatives of NGOs and networks working on REDD+	Date
Interview 9	Q1 2020		
Interview 10	Q4 2019		
Interview 11	Q4 2019	Interview 29	Q4 2019
Interview 12	Q4 2019	Interview 30	Q1 2020
Interview 13	Q4 2019	Interview 31	Q4 2019
Interview 14	Q4 2019	Interview 32	Q1 2020
Interview 15	Q4 2019	Interview 33	Q1 2020
Interview 16	Q4 2019	Interview 34	Q4 2019
Interview 17	Q1 2020	Interview 35	Q4 2019
Interview 18	Q1 2020	<i>Note: Interviews were conducted between October 2019 and February 2020.</i>	
Interview 19	Q1 2020		
Interview 20	Q4 2019		
Interview 21	Q4 2019		

Table 11 Overview of analysed measures

	Title	Country / countries	REDD+ elements (if not in title)	Commissioning entity	Implementing organization	Duration
1	REDD Early Movers (REM) Acre (Phase 1)	Brazil		BMZ	KfW	2012 – 2015
2	Amazon Fund for Forest Conservation and Climate	Brazil	Results-based national funding mechanism for REDD+	BMZ	GIZ, KfW	2010 – 2016 (first phase)
3	REDD – National Forest Inventory in Mongolia	Mongolia		BMZ	GIZ	2014 – 2017
4	Reduction of Greenhouse Gases from Deforestation and Forest Degradation (REDD) in Central America and the Dominican Republic	Central America, Dominican Republic		BMZ	GIZ	2010 – 2017
5	Climate Protection Through Avoided Deforestation (REDD) in Laos (CLiPAD)	Laos		BMZ	GIZ, KfW	2014 – 2018
6	Protection of Forests and the Climate (REDD+)	Colombia		BMZ	GIZ	2013 – 2019
7	REDD+ Readiness and Rehabilitation of Forests (Pro REDD)	Togo			GIZ	2014 – 2019
8	Conservation of Biodiversity and Forest Management	Democratic Republic of Congo	Measure supported the government in the fields of sustainable forest management, certification and climate strategies, such as REDD+	BMZ	GIZ	2013 – 2016
9	Support to Implementation of National Forest and Environmental Program	Cameroon	Measure supported development of an integrated national climate strategy incl. REDD	BMZ	GIZ	2010 – 2015

	Title	Country / countries	REDD+ elements (if not in title)	Commissioning entity	Implementing organization	Duration
10	Sustainable Natural Resources Management (Gestion sostenible de recursos naturales – GESOREN)	Ecuador	Measure supported government institutions and non-governmental actors in developing a coherent, institutional and legal framework REDD	BMZ	GIZ	2010 – 2016
11	Forestry and Climate Change (FOR-CC)	ASEAN	Measure supported the Member States and ASEAN specialized bodies in improving the regional and national frameworks for REDD+ and FLEGT	BMZ	GIZ	2015 – 2018
12	Global support Initiative to Implement Good Governance for Forest Conservation (FGP)	Global	Measure supported the development and negotiation of national REDD+ strategies	BMZ	GIZ	2011 – 2018
13	Forest and Climate Protection (FORCLIME)	Indonesia	Measure supported the Indonesian Ministry of Environment and Forestry in developing and implementing improved regulatory and institutional framework conditions for REDD+	BMZ	GIZ	2012 – 2017
14	Climate-related Modernization of National Forest Policy and Piloting REDD Measures in the Philippines	Philippines		BMU	GIZ	2009 – 2013
15	National REDD+ System for the Philippines	Philippines		BMU	GIZ	2012 – 2017
16	Biodiversity Conservation through Preparatory Measures for Avoided Deforestation (REDD) in the Merang Peat Forest Area	Indonesia		BMU	GIZ	2008 – 2011

	Title	Country / countries	REDD+ elements (if not in title)	Commissioning entity	Implementing organization	Duration
17	Development of Integrated Monitoring Systems for REDD+ in the SADC Region	Botswana, Malawi, Mozambique, Zambia		BMU	GIZ	2011 – 2015
18	REDD+ – Forest Conservation in Pacific Island Countries	Fiji, Papua New Guinea, Solomon Islands, Vanuatu		BMU	GIZ	2015 – 2019
19	Incorporating the Amazon Indigenous REDD+ Proposal into Climate Change Strategies	Colombia, Ecuador, Peru		BMU	World Wide Fund for Nature (WWF)	2014 – 2017
20	Promoting Ecosystem-Based Adaptation Through Mangrove Restoration and Sustainable Use in Thailand and Viet Nam	Thailand, Viet Nam	Measure produced results that were fed into national and provincial laws, regional learning and global dialogue on REDD+	BMU	International Union for Conservation of Nature (IUCN)	2012 – 2016
21	Harapan Rainforest - Pilot Restoration of a Degraded Forest Ecosystem on Sumatra	Indonesia	Measure provided important information to support the development of a REDD+ strategy for Indonesia and elsewhere.	BMU	KfW	2009 – 2014
22	Exploring Mechanisms to Promote High Biodiversity REDD : Piloting in Viet Nam ¹¹	Laos, Viet Nam		BMU	SNV Netherlands Development Organisation	2010 – 2016

¹¹ Different title in second phase: Delivering Environmental and Social Co-benefits from REDD+ in Southeast Asia (MB-REDD)

	Title	Country / countries	REDD+ elements (if not in title)	Commissioning entity	Implementing organization	Duration
23	Piloting Nested REDD+ Accounting in Colombia	Colombia		BMU	Winrock International Institute for Agricultural Development	2013 – 2017
24	Protecting Forest for the Benefit of Climate, People and Nature in Paraguay –A Multi-Level Approach	Paraguay	Measure focused on planning and testing tailor-made REDD+ projects for the local population and indigenous populations	BMU	World Wide Fund for Nature (WWF)	2012 – 2016
25	Advancing Understanding of Natural Forest Carbon Stock Enhancement as Part of REDD+	Laos, Viet Nam		BMU	SNV Netherlands Development Organisation	2011 – 2018
26	National Forest Monitoring and Information Systems for a Transparent and Truthful REDD+	Algeria, Argentina, Bhutan, Brazil, Chile, Colombia, Ghana, Kyrgyzstan, Laos, Morocco, Mozambique, Peru, Philippines, South Africa, Tajikistan, Thailand, Tunisia, Uruguay, Zambia		BMU	Food and Agriculture Organization of the United Nations (FAO)	2013 – 2016
27	REDD+ Benefits: Designing REDD+ Benefit-Sharing Systems that Reduce Poverty	Ghana, Mexico, Peru		BMU	International Union for Conservation of Nature (IUCN)	2013 – 2016
28	Forest protection and REDD (Socio Bosque)	Ecuador		BMZ	KfW	2010 – 2017

	Title	Country / countries	REDD+ elements (if not in title)	Commissioning entity	Implementing organization	Duration
29	Conservation of Tropical Forest – Guyana Protected Area System (GPAS)	Guyana	Measure supported the collection of basic data as well as the development of reference scenarios and monitoring systems for climate and biodiversity protection within the "Readiness Preparation Plans" for REDD+	BMZ	KfW	2006 – 2019 (GPAS I+II)
30	REDD – FORECA (Forêts Engagées comme Reservoirs de Carbone)	Madagascar		BMEL, BMZ	Thünen-Institut, GIZ	2007 – 2011

Table 12 Analysis criteria and questions

Criterion	Definition	Key question	Sub-questions
Relevance	Extent to which the design and objectives of a given measure are in line with the needs of the target group, the priorities and policies of the recipient, the priorities and policies of the donor and the international development agenda	To what extent has the measure been relevant?	<p>a. International agenda To what extent has the measure been in line with the international REDD+ agenda under the UNFCCC as well as other international agreements, such as the CBD, CCD, NYDF, SDGs?</p> <p>b. Further development of REDD+ To what extent has the measure influenced the further development and design of REDD+?</p> <p>c. National needs and priorities To what extent has the measure been in line with the needs of the partner countries and their emission reduction priorities as expressed, for instance in national development plans, emission reduction strategies, REDD+ strategies, and forest-related mitigation objectives enshrined in the NDCs? To what extent has the measure been oriented towards the (increasing) deforestation rate or the (increasing) pressure on forests?</p> <p>d. Relationship with REDD+ measures financed and implemented by other entities (German or non-German) in partner countries To what extent has the measure been in line with other REDD+ measures – i.e., measures financed and implemented by other entities – in the partner country?</p> <p>e. German priorities and strategies To what extent has the measure been in line with German priorities and strategies?</p>
Effectiveness	Extent to which the outputs generated by a given measure contribute – or can be expected to contribute – to achieving the	What outputs have been generated and what is their contribution – or expected contribution – to achieving the outcomes (defined in the ToC)?	<p>a. Contribution to outcomes To what extent has the measure contributed – or can be expected to contribute – to achieving the outcomes defined in the ToC?</p> <p>b. Outputs achieved To what extent have the intended outputs be achieved?</p> <p>c. Factors influencing the (non-)achievement of outputs</p>

Criterion	Definition	Key question	Sub-questions
	outcomes (defined in the ToC)		<p>What are the main factors that have supported or hindered the achievement of outputs?</p> <p>d. Acceptance and legitimacy To what extent has the measure contributed to the acceptance and legitimacy of REDD+ in the partner country?</p> <p>e. Political steering How well have actors in charge – including national counterparts – controlled and managed the implementation of the measure?</p> <p>f. Co-benefits What environmental, economic, and social co-benefits have been generated at various levels?</p> <p>g. Safeguards Has the measure adequately promoted and supported safeguards?</p> <p>h. Unintended consequences Has the measure produced unintended effects?</p>
Efficiency	Adequacy of resources (qualitative and quantitative outputs in relation to inputs)	To what extent has the implementation of the measure been efficient?	<p>a. Costs and timeliness of outputs Have there been any delays and/or cost increases?</p> <p>b. Input output ratio What is the relationship between costs (inputs) and benefits (outputs), considering both qualitative and quantitative results? What has been the share of administrative and operational costs?</p> <p>c. Input output ratio in terms of avoided emissions If the contribution to forest conservation and sustainable management of forests can be quantified and measured: what is the relationship between costs (inputs) and benefits (outputs) in terms of avoided emissions (€/t CO₂e)?</p>
Sustainability	Extent to which results are likely to continue after funding has ended	How likely is it that outputs generated through the measure can be sustained after German support has ended and thus continue to contribute to	<p>a. Financial resources To what extent is the continuation of the measure dependent on external funding? How far has the measure contributed to the acquisition of additional REDD+ finance? To what extent has the measure contributed to the mobilization of domestic public and/or private finance?</p>

Criterion	Definition	Key question	Sub-questions
		achieving the outcomes (defined in the ToC)?	<p>b. Human and institutional capacities as well as institutional structures To what extent has the measure contributed to the establishment or consolidation of human and institutional capacities as well as institutional structures that ensure the continuation of activities relevant for generating outputs and outcomes?</p> <p>c. Ownership and willingness of partner countries To what extent are the partner countries able – considering institutional, human, and financial abilities – and willing to sustain generated outputs and changes?</p> <p>d. Integration into other development and climate measures To what extent has the measure been integrated into other development/climate measures?</p> <p>e. Climate proofing To what extent are the generated outputs and outcomes resilient to impacts of climate change?</p> <p>f. Permanence and leakage To what extent are the generated outputs and outcomes permanent and able to prevent leakage? How has the measure dealt with both issues?</p>
Overarching (development) impact	Positive and negative changes – actual and potential, direct or indirect, intended or unintended – produced by the measure	What are the actual and potential, positive and negative, intended and unintended overarching effects of the measure, both in terms of the sustainability of the forest cover and emission reductions as well as regarding general land-use planning?	

Table 13 Objectives and outputs achieved (self-reporting)

Title	Country / countries	Objective(s)	Outputs (indicators) achieved (self-reporting)
REDD Early Movers (REM) Acre (Phase 1)	Brazil	Significant emission reductions from avoided deforestation and forest degradation in the State of Acre.	<ul style="list-style-type: none"> Indicator 1 achieved: Compensate ER of at least 4 MtCO₂e [Baseline: 0; Aim: 4 MtCO₂e; Status: 4.102 MtCO₂e] Indicator 2 overachieved: Increase in the number of SISA beneficiary families in existing programmes [Baseline: 2,000; Aim: 8,000; Status: 12,315] Indicator 3 achieved: Implementation of at least two new subprograms (e.g. REDD/Indigene) [Baseline: 0; Aim: 2; Status: 2] Indicator 4 achieved: SISA's financial sustainability improved by 50% compared to initial situation [Baseline: 100; Aim: 150; Status: 150] Indicator 5 overachieved: 400 additional persons trained in the SISA system [Baseline: 0; Aim: 400; Status: 574] Indicator 6 achieved: At least one additional cooperation agreement with a new SISA funding partner for ER remuneration [Baseline: 0; Aim: 1; Status: 1]
Amazon Fund for Forest Conservation and Climate	Brazil	The Amazon Fund significantly improves the implementation of national and international obligations in regard to the reduction of deforestation and sustainable development.	<ul style="list-style-type: none"> Indicator 1 (funding volume) partly achieved (57%): funding volume has been increased but not as much as planned Indicator 2 (quality criteria of individual projects) achieved Indicator 3 (impact monitoring) partly achieved (80%) Indicator 4 (use of knowledge management) achieved Indicator 5 (involvement of third-party countries) achieved
REDD – National Forest Inventory in Mongolia	Mongolia	The technical and policy proposals for the implementation of sustainable and climate-change oriented forest management and the appropriate reporting system are used by the Ministry of Environment.	<ul style="list-style-type: none"> Output A achieved: A comprehensive, permanent, and multi-purpose National Forest Inventory is in place. Output B achieved: Consolidated forest carbon data sets are developed in line with proposed formats for Mongolia's climate change reporting. Output C achieved: Policy recommendations and operational guidance for praxis are derived from applied research based on NFI. Output D partly achieved (50%): New forest planning and silvicultural procedures are streamlined into forestry education and extension.
Reduction of Greenhouse Gases	Central America,	The framework for the effective implementation of sustainable	<ul style="list-style-type: none"> Indicator 1 partly achieved: Joint position papers prepared for the COP 17 in Durban, but no common position in international negotiations.

from Deforestation and Forest Degradation (REDD) in Central America and the Dominican Republic	Dominican Republic	compensation mechanisms for the reduction of CO2 emissions from deforestation and forest degradation has been improved in the CCAD member states.	<ul style="list-style-type: none"> Indicator 2 achieved: At least 4 countries have implemented 2 elements in their national REDD strategies. Readiness Preparation Proposals (R-PPs) prepared (BE, Dom. Rep.), approved (HN, NI, G, SLV) and implementation initiated (CR, PA); initiation of pilot projects for compensation and benefit-sharing mechanisms. Indicator 3 partly achieved: The effective participation of indigenous and local communities, small producers and women in the design of REDD compensation mechanisms level. Indicator 4 achieved: Regional and national policymakers steer the implementation of their REDD strategies at regional level and in 6 countries (aim: 4 countries) based on monitoring results. Regional database for forest resource monitoring and completion of MRV methodologies (e.g. installation of forest monitoring units). Collection and organization of key information and data on forest resources and carbon calculation.
Climate Protection Through Avoided Deforestation (REDD) in Laos (CLiPAD)	Laos	Concepts for the implementation of REDD+ are applied by the relevant actors at national and sub-national level.	<ul style="list-style-type: none"> Indicator 1 partly achieved (90%): The legal framework for results-based payments has been established at national level and in the Houaphan province, according to international standards for REDD+. MRV system has been developed and the reference emission level (REL) has been reported to the UNFCCC by the Laotian government. National REDD+ strategy has been developed and needs to be approved by the MAF. Essential elements of the Safeguard Information System (SIS) and the Benefit Sharing Mechanism are in place. Indicator 2 achieved: The competencies of the staff in the relevant REDD+ institutions correspond to 80% of the requirements identified in the specific need analysis. Indicator 3 achieved: Actors (pilot villages in Houameuang and Sam Neua district, as well as district and provincial authorities) receive outcome-based payments from X emission reductions (compared to the reference emission level, REL) in Houaphan province. Important prerequisites for results-based payments for emission reductions were created in pilot villages. Indicator 4 partly achieved (80%): The average household income of pilot villages has increased by 20% through the sustainable management of natural resources (including sustainable agriculture). The household income of the pilot villages has risen by the establishment of Village Development Funds (VDFs) that are explicitly

			used for sustainable management of natural resources and sustainable agriculture.
Protection of Forests and the Climate (REDD+)	Colombia	The development and implementation processes of the national REDD+ strategy follow an intersectoral approach according to the criteria of the Forest Carbon Partnership Facility, which takes into account regional structures as well as social and environmental standards.	<ul style="list-style-type: none"> Indicator 1 achieved: Three agreements which were established in the voting mechanisms for the national REDD+ strategy between the Ministry of the Environment and other relevant actors have been implemented and improve coordination and cooperation within the framework of REDD+ policy. Indicator 2 overachieved: In 6 departments (aim: 4 departments), implementation structures developed from pilot measures are being used to reduce deforestation (e.g. forest round-table meetings). Indicator 3 achieved: A gender-differentiated system of social and environmental standards for REDD+ (Safeguards) has been developed in consultation with the Ministry of the Environment. The National Safeguard System has been developed and is being piloted in Amazonia and the Pacific Coast. Indicator 4 overachieved: 75% (Aim: 50%) of the recommendations from the 6 studies on drivers of deforestation are implemented in the departments within the framework of the national REDD + strategy in the form of policies etc. Indicator 5 achieved: The Ministry of the Environment produces two reports a year on the progress of the development of the national REDD+ strategy.
REDD+ Readiness and Rehabilitation of Forests (Pro REDD)	Togo	The technical and institutional framework conditions for the implementation of REDD+ and forest rehabilitation have been improved.	<ul style="list-style-type: none"> Indicator 1: The areas of responsibility and mandates of the qualified decision-makers for steering the implementation of the national REDD strategy were laid down in writing. Indicator 2: The concept and data basis for the collection of the reference level and the REDD+ system for the measurement, reporting and verifiability of avoided emissions, and compliance with environmental and social standards (safeguards) are available. Indicator 3: Recommendations, developed in a participatory way from good practices, on sustainable forest management, community forest management, forest rehabilitation, and on income improvement for women, are available for transfer into the national REDD Readiness Process. Note: Final report not available yet (is needed to indicate degree of achievement).

Conservation of Biodiversity and Forest Management	Democratic Republic of Congo	<p>State and non-state institutions, which are responsible for the sustainable management of natural resources at national and provincial levels, perform their political and operational tasks better.</p>	<ul style="list-style-type: none"> Indicator 1 not achieved: Aim: 16 measures from the newly created sector programmes for the provincial level have been initiated in Maniema, South Kivu and Katanga. Status: indicator has not been reached but indispensable conditions for the implementation of the measures have been created. All three provinces prepare the provincial PPEFEBs (Programme provincial Environnement, Forêts, Eau et Biodiversité – PPEFEB); the province Maniema has submitted a finished draft to the MECNT). Indicator 2 partly achieved: Aim: In the province of Maniema, forest use carried out by authorized persons within the framework of a state economic plan. Status: in Maniema, three different models of sustainable land use were planned but not yet carried out. Indicator 3 partly achieved: Aim: In the province of South Kivu, three reforestations were carried out in accordance with international standards as part of the energy wood value chain. Status: Two afforestation models have been implemented (on state and private land: 50 ha from this 25-ha afforestation and 25-ha agroforestry), a third model is under construction. Indicator 4 partly achieved: Aim: A protected area (Lomami or Kundelungu) has one efficient protected area, after the assignment of development aid workers, and seven further protected areas have improved administration. Status: A set of instruments (e.g. monitoring and evaluation, budget/activity planning, training) was introduced in all parks.
Support to Implementation of National Forest and Environmental Program	Cameroon	<p>Relevant actors in forestry / nature conservation sector are contributing to sustainable management of natural resources within National Forest Programme. Stabilization of forest policy and forest resources in the Congo Basin.</p>	<ul style="list-style-type: none"> Indicator 1 achieved: The area of permanent forests with a management plan (MP) was increased from 7.38 million ha in 2009 to 9.74 million ha in 2014 (annual increase of 6.6%, aim was at least 5%) through establishment of national parks, municipal forests, etc. Indicator 2 partly achieved: Necessary regulations to implement the APV-FLEGT agreement are in place, procedures for issuing legal certificates have been adopted, and the publication of relevant information on forestry is ensured; nevertheless, no legal certificate could be issued by the end of the project due to the delayed development of the electronic verification system (SIGIF). Indicator 3 partly achieved: Supported municipalities allocate at least 50% of the revenues from forest resource management/forest taxes to local development

			<p>(source: 10 municipalities.); improvement in water/health care; education remained stagnant; no further reliable data available.</p> <ul style="list-style-type: none"> Indicator 4 achieved: Allocation of public funding to MINFOF/MINEPDED is based on indicators of programme budgets. Indicator 5 achieved: Adoption of a national climate strategy, taking sustainable energy wood production and supply into account; institutional framework for the development of a national REDD strategy is operational (establishment of technical secretariat and steering committee); however, MINEPDED's leadership role continues to be weak, making it difficult to implement the climate papers.
Sustainable Natural Resources Management (Gestión sostenible de recursos naturales – GESOREN)	Ecuador	<p>The poor rural population supported in the intervention area apply strategies and methods of sustainable natural resource management and increase their income.</p>	<ul style="list-style-type: none"> Indicator 1 achieved: Aim: Monitoring results on an area of 300,000 ha in 2 of the 4 protected areas supported by the project show an improvement in the ecological condition of an average of 10 points according to EEM scorecard criteria. Status: Improvement by 30 points and concrete measures for the benefit of the population and nature conservation on 313.007 ha. Indicator 2 achieved: Aim: 8 protection or use agreements, including written agreements on the contribution of the municipalities and the local population, are implemented on a total area of 50,000 hectares of municipal protected areas/eco-corridors. Status: more than 20 protection agreements covering an area of a total of over 1.5 million ha. Indicator 3 achieved: Aim: The number of small farmers/families benefiting from the project has risen from 29,000 (2008) to 50,000, and their income increased by at least 20% through the valorization of natural resources; Status: 58,386 benefitted families. Indicator 4 achieved: Aim: The share of participating companies/families with female board members has increased from 3,869 (2008) to 6,400. Status: 7,001. Indicator 5 not achieved: Aim: On the basis of the standards adopted by the government, the private sector and local authorities are implementing exemplary REDD+ activities in two intervention areas. Status: The REDD+ mechanism in Ecuador is regulated according to the “national approach” according to the Ministerial Decision No. 33, adopted in April 2013. However, the relevant specific standards have not yet been adopted, so the pilot activities could not be implemented.

Forestry and Climate Change (FOR-CC)	ASEAN	ASEAN has improved the cooperation and joint positioning of its member states on climate change-related key issues in agriculture and forestry.	<ul style="list-style-type: none"> Indicator 1 overachieved: ASEAN has submitted 5 (aim: 2) additional joint statements in international forums related to agriculture or forestry. Indicator 2 overachieved: 4 (aim: 3) ASEAN expert committees have each contributed (e.g. policy recommendation, project proposal) to promoting competitiveness or climate smart practices in agriculture and/or forestry to the ASEAN decision-making bodies. Indicator 3 partly achieved: AMS have successfully acquired investments for the dissemination of climate smart practices in value chains of agriculture and/or forestry with a total value of USD 1,010,000 (aim: USD 5,000,000); a large-volume proposal to support the implementation of the NDC in the areas of agriculture and land use, submitted within the German framework of IKI, was rejected due to a too narrow sectoral approach. Indicator 4 achieved: All (aim: all) investments raised by AMS to disseminate climate smart practices in value chains in agriculture and/or forestry are earmarked for project proposals that include measures to improve women's participation in value creation.
Global support Initiative to Implement Good Governance for Forest Conservation (FGP)	Global	The effectiveness of international forest governance initiatives, in particular REDD+ and FLEGT, is enhanced.	<ul style="list-style-type: none"> Indicator 1 overachieved: In 11 countries (aim: 6) the preparation of a national REDD+ strategy is significantly advanced compared to the initial situation and/or measures for implementation (e.g. safeguards, benefit sharing, clarification of land-use rights, MRV system) have been started. Indicator 2 overachieved: In 5 countries (aim: 3) the negotiation of Voluntary Partnership Agreements (VPA) is significantly advanced and/or measures for implementation of VPAs have been initiated. Three more countries (Guyana, Honduras, Viet Nam) have finalized the negotiation of a VPA and negotiations started in Laos, Ivory Coast, and Thailand. Indicator 3 overachieved: a) 3 initiatives (aim: 3) conceived and implemented by the project, and b) 16 (aim: 3) other initiatives supported by the project have further developed/implemented individual governance themes that are particularly important for REDD+ and FLEGT (e.g. anti-corruption, accountability, use of private standard systems). Indicator 4 overachieved: 12 cooperation agreements (aim: 5) initiated with the private sector, international knowledge networks, think tanks, other regional and

			international partnerships and/or organizations have developed and disseminated solutions to transnational problems of forest governance (e.g. leakage).
Forest and Climate Protection (FORCLIME)	Indonesia	Implementation of forest protection and sustainable forest management strategies reduces emissions from the forestry sector and improves living conditions for the rural poor. Relevant public and private actors use tested methods and services in elaborating framework conditions (policy, legal, institutional) of integrated sustainable forest management in the context of greenhouse gas emission reductions.	Second phase (FORCLIME II) still ongoing (until 2020); no overall final report available (yet).
Climate-related Modernization of National Forest Policy and Piloting REDD Measures in the Philippines	Philippines	The Ministry of the Environment (DENR), local authorities and the local population are using an improved climate-relevant forestry policy to reduce greenhouse gas emissions.	<ul style="list-style-type: none"> Indicator 1 achieved: Aim: Prevention of the release of 35,000 tonnes of bound carbon from natural forests (500 ha lower deforestation rate in pilot areas compared to base year 2009). Status: On the initiative of the project, DENR has not approved the conversion of 3,000 ha of planned deforestation by resettlement in the project area and instead promoted sustainable municipal forest management. This prevented the release of 306,000 tonnes of bound carbon (approx. 1.123 million tonnes of CO₂ emissions). Furthermore, by designating and securing protection forests on a total of 17,120 ha in the project area compared to the initial situation, 101 ha of forest loss will be avoided annually from 2012 onwards, corresponding to an annual emission reduction of 56,028 t CO₂ compared to the baseline, assuming conservative assumptions of 50% effective protection. Indicator 2 partly achieved (73%): Aim: An additional 7,000 tonnes of carbon fixed annually in rehabilitated forests and afforestation (from 2012 compared to base year 2009); Status: A total of 2,178 ha of forest and agroforestry areas were created in the form of forest rehabilitation (1,045 ha), including rattan as income-relevant enrichment plantation, afforestation (491 ha), and establishment of agroforestry systems (642 ha). The annual binding of atmospheric carbon and

			<p>carbon dioxide is 5,107 tC and 18,745 tCO₂e, respectively. The lower degree of target achievement is due to the higher proportion of agroforestry areas with fruit production compared to the original planning. Fruit trees show a lower wood growth and thus a lower CO₂ binding. The target groups preferred the planting of fruit trees and rattan because of the additional effects in terms of improved income and nutrition.</p> <ul style="list-style-type: none"> Indicator 3 achieved: Aim: Conservation of biodiversity through the protection and rehabilitation of 5,000 ha of natural forests and the establishment of 2,000 ha of species-rich reforestations; Status: A total of 21,752 ha of protection forest was designated as part of the forest land-use planning in the project area South-Leyte. In order to anchor their protection permanently, contracts for forest protection were concluded with rural districts and forest user groups. In total, these contracts cover a natural forest area of 17,120 ha, which is ensured by the establishment of forest guard teams (Bantay Gubat). Indicator 4 achieved: Aim: Contract nature conservation tested as an essential element of a national REDD strategy. Status: Forest and nature conservation were enshrined in a total of ten Conservation Agreements with rural districts and forest user groups in the project area. These contracts include the establishment of forest guard teams (Bantay Gubat). Forest protection committees and 11 forest protection teams with forest guards have been set up in four out of five local authorities.
National REDD+ System for the Philippines	Philippines	The Department of Environment and Natural Resources and other relevant authorities, local communities, and Indigenous Peoples use a national framework based on internationally recognized environmental and social standards, and implement corresponding measures.	<ul style="list-style-type: none"> Indicator 1 partly achieved (90%): All important studies, tools, methodologies, database and systems that serve as the basis for the national REDD+ implementation have been produced, field tested, and made available for adoption by CCC, DENR, and other agencies. Indicator 2 achieved: Forest Land Use Plans in municipalities (= pilots) contributed to 161.5 ha per year avoided net deforestation (an estimated 467,000 t CO₂e). Indicator 3 achieved: Results have been incorporated into reviews, decisions, and resolutions.
Biodiversity Conservation through	Indonesia	Contribute to sustainable natural resource management,	No list of target indicators available.

Preparatory Measures for Avoided Deforestation (REDD) in the Merang Peat Forest Area		biodiversity protection, and rehabilitation of degraded peat lands in South Sumatra.	
Development of Integrated Monitoring Systems for REDD+ in the SADC Region	Botswana, Malawi, Mozamb., Zambia	In at least 3 SADC states an integrated MRV system for forest areas, carbon stocks, and emissions from deforestation and forest degradation is developed and is in use (technical readiness).	No list of target indicators available but note that project goals have been largely achieved.
REDD+ – Forest Conservation in Pacific Island Countries	Fiji, Papua New Guinea, Solomon Islands, Vanuatu	Supporting countries in the implementation of national strategies for preparing the REDD+ mechanism. It is intended to help them to reduce GHG emissions in the forest sector according to international (MRV) standards by 2020.	<p>Outcomes:</p> <ul style="list-style-type: none"> Indicator 1 (at least 2 countries submit draft for emissions reference level to UNFCCC): achieved. Indicator 2 (at least 2 countries submit social and ecological standards to UNFCCC): will probably be achieved. Indicator 3 (at least 2 countries have system for equitable distribution of results-based finance): will probably be achieved. <p>Output I: regional supporting structure for forest and biomass inventory as well as knowledge and data management are functional:</p> <ul style="list-style-type: none"> Indicator 1 (staff exchange and training at SPC): overachieved. Indicator 2 (content and security structure of regional REDD+ information platform is updated 4 times a year): partly achieved. Indicator 3 (at least 3 countries use remote sensing products for national forest monitoring): partly achieved. Indicator 4 (develop regional register for CO2 budget of forest carbon projects): will probably be achieved. <p>Output II: national REDD+ strategies:</p> <ul style="list-style-type: none"> Indicator 1 (regulation in place for equitable participation of stakeholders in REDD+ and with regard to land and carbon rights as well as benefit sharing): will probably be partly achieved.

			<ul style="list-style-type: none"> Indicator 2 (action plans to prevent and reverse forest degradation and sustainable forest management): achieved. <p>Output III: practical experience from local forest carbon projects and demonstration activities in pilot areas to support national REDD+ strategy development:</p> <ul style="list-style-type: none"> Indicator 1 (mid-term evaluation of FCPF readiness processes refers to results from pilot areas and demonstration activities): achieved. Indicator 2 (at least one local forest carbon project in each country certified by Plan Vivo): partly achieved (will probably be achieved at the end of the project).
Incorporating the Amazon Indigenous REDD+ Proposal into Climate Change Strategies	Colombia, Ecuador, Peru	By 2017, the indigenous proposal for REDD+ has been technically supplemented and incorporated into the international, national and sub-national processes. At least 1 of the 3 countries has included key elements of this proposal in national strategy.	<ul style="list-style-type: none"> Indicator 1A achieved: Two studies on the evaluation of ecosystem services have been prepared. Indicator 1B achieved: A total of 430 persons and 10 institutions have been informed about the measure and process. Indicator 1C partly achieved (70%): The guideline included in one of the studies on ecosystem services is now available online but has not yet been translated into native languages. Indicator 1D achieved: Publication of good practices and lessons learnt on holistic management strategies have been published at regional level. Indicator 2A achieved: Indigenous REDD+ approach is integrated in public policies. Indicator 2B achieved: Over 300 persons in 10 workshops have been informed about the application of elements provided by the Indigenous REDD+ approach; experience from pilots has been shared through information and training workshops. Indicator 2C achieved: “Livelihood plans” of Indigenous communities in pilot areas in Peru and Colombia have been prepared. Indicator 3A achieved: Additional documents on Indigenous vision have been created that take into account the national contexts. Indicator 3B achieved: Indigenous REDD+ approach has been discussed by key stakeholders and in key REDD+ processes in partner countries. Indicator 3C achieved: Indigenous REDD+ approach has been presented at climate change conferences. Indicator 3D achieved: Several capacity-building workshops have been organized. Indicator 3E partly achieved (50%): Preparation of documents on standards for Indigenous REDD+ approach has been started but not yet been finalized.

			<ul style="list-style-type: none"> Indicator 3F achieved: The degree of participation of civil society organizations in the development of the national REDD+ strategies has been increased through workshops and roundtables.
Promoting Ecosystem-Based Adaptation Through Mangrove Restoration and Sustainable Use in Thailand and Viet Nam	Thailand, Viet Nam	Ecosystem-based adaptation (EBA) and mitigation options are promoted by the provision of economic incentives and policy advice fostering mangrove restoration and sustainable use in coastal areas of Viet Nam and Thailand.	No list of target indicators available.
Harapan Rainforest – Pilot Restoration of a Degraded Forest Ecosystem on Sumatra	Indonesia	Contribution to the significant reduction of CO2 emissions from deforestation by (1) implementation of an exemplary, structurally effective lighthouse project in the field of tropical forest conservation and (2) securing 10-15 million tonnes of carbon dioxide within the first 30 years.	No list of target indicators available.
Exploring Mechanisms to Promote High Biodiversity REDD: Piloting in Viet Nam	Laos, Viet Nam	To protect biodiversity by reducing deforestation and forest degradation, through widespread adoption of a high biodiversity REDD+ mechanism. In particular, to establish, test, and disseminate technical knowledge and political capacity to deliver environmental and social co-benefits from national REDD+ programmes in Laos and Viet Nam.	<ul style="list-style-type: none"> Output Area 1 overachieved / achieved: Knowledge products have been generated. Output Area 2 overachieved / achieved / partly achieved: National government-led environmental and social safeguard roadmaps produced as part of national REDD+ programmes. Output Area 3 overachieved / achieved: REDD+ Implementation Plans (RIPs), which promote emission reductions and environmental and social co-benefits, demonstrated at two sites in Viet Nam. Output Area 4 overachieved / achieved / partly achieved: Expanded participatory forest monitoring (PFM) model (biodiversity, carbon, and social) promoting social and environmental co-benefits is developed through government-led pilots in demonstration sites.

			<ul style="list-style-type: none"> Output Area 5 not achieved: Local BDS coefficients, which promote environmental and social co-benefits, designed and introduced to national policy fora in Laos and incorporated into subnational planning in Viet Nam.
Piloting Nested REDD+ Accounting in Colombia	Colombia	Conduct first pilot of nested REDD+ approach and build capacity for REDD+ implementation at national and subnational levels. Strengthening REDD+ in national policies and creating systems of standards / regulations, building the capacity national and subnational governments and private industry to participate in REDD+.	<ul style="list-style-type: none"> Output 1 (National pre-feasibility assessment to identify areas for priority subnational RLs) achieved. Output 2 (Review subnational RLs to test results-based accounting and improve understanding of drivers) achieved. Output 3 (Options, implications and methods for nesting of projects) achieved. Output 4 (Establish subnational monitoring and reporting scheme) achieved. Output 5 (Support development of national and/or subnational policy to implement nesting) achieved. Output 6 (Develop online national REDD+ register) achieved. Output 7 (Support development of national positions to the UNFCCC on REDD+) achieved (there was also the opportunity to provide advice on recommendations for Colombia in its negotiations under ICAO/CORSIA as well as with regard to regional positions on REDD+ and article 6 / new market mechanisms for REDD+ financing). Output 8 (Build capacity within Colombia on nesting policy) achieved. Output 9 (Develop training material and guidebooks) achieved. Output 10 (Providing ongoing technical support) achieved.
Protecting Forest for the Benefit of Climate, People and Nature in Paraguay – A Multi-Level Approach	Paraguay	The government of Paraguay is actively involved in REDD+, has extended the ban on deforestation for another five years and adopted an official PES scheme. Various transferable concepts for the implementation of REDD+ have been developed that can serve as forward-looking models for other countries.	<ul style="list-style-type: none"> Output 1 achieved: Report prepared on land ownership, deforestation, and causation of deforestation for the Pantanal and the Atlantic Rainforest. Output 2 achieved: Each of the six pilot regions / municipalities has developed economic alternatives tailored to the respective situation (handicraft, agriculture, etc.). Output 3 achieved: Stakeholders involved at the sub-national level have been informed and trained in the implementation of REDD + (including with regard to legal aspects) and are actively participating in the national process. Output 4 achieved: Key decision-makers now have expertise on the importance of extending the ban on forest clearance in Eastern Paraguay as well as on the functioning of the REDD + mechanism and are working on a concept for its implementation at national level.

			<ul style="list-style-type: none"> Output 5 achieved: There is now a regulation that allows payments for environmental services for forest owners. Output 6 achieved: A recommended MRV system for REDD + projects has been developed and is ready for implementation in the pilot projects. Output 7 achieved: A model for REDD + projects is developed, which will be available to countries and regions as a blueprint. Output 8 achieved: Civil society, responsible authorities, and stakeholders have been informed of the project goals for climate-friendly land-use planning and REDD+ through a communication campaign.
Advancing Understanding of Natural Forest Carbon Stock Enhancement as Part of REDD+	Laos, Viet Nam	Advance understanding of forest carbon stock enhancement (FCSE) as part of any future REDD+ agreement by exploring the technical and economic feasibility of different FCSE in pilot sites and address issues being an obstacle for larger scale replication of Forest landscape restoration (FLR).	<ul style="list-style-type: none"> Output 1: all indicators overachieved (measure has successfully introduced pilot activities leading to enhancement of forest carbon stocks in representative forest ecosystems). Output 2: some indicators overachieved / some indicators achieved (measure has designed pro poor benefit distribution system which provides appropriate incentives for FCSE). Output 3: some indicators overachieved / some indicators achieved (measure has disseminated technical guidance on inclusion of FSCE as part for provincial and national REDD+ programme). Output 4: some indicators overachieved / some indicators achieved (provinces now produce FLR plans).
National Forest Monitoring and Information Systems for a Transparent and Truthful REDD+	Worldwide ¹²	Build autonomous capacity of 18 countries by (1) the support of REDD+ readiness process, (2) development of free tools for forest monitoring, and (3) establishment of key elements of national forest monitoring systems for REDD+, compliant with REDD+ requirements, by knowledge	<ul style="list-style-type: none"> Output 1 achieved: Training of 18 teams of experts on the use of remote sensing and GIS techniques for forest monitoring. Output 2 achieved: Setting up or further developing 15 remote sensing / GIS laboratories. Output 3 achieved: Development of specific open-source software tools and country-specific methodologies and procedures to assess forest canopy changes and to monitor forestry and REDD+ activities. Output 4 achieved: Publication of country-specific LULUCF activity data within the UNFCCC REDD+ web platform.

¹² Algeria, Argentina, Bhutan, Brazil, Chile, Colombia, Ghana, Kyrgyzstan, Laos, Morocco, Mozambique, Peru, Philippines, South Africa, Tajikistan, Thailand, Tunisia, Uruguay, Zambia

- Indicator 1 (external funding): **not achieved**
- Indicator 2 (institutionalization of Programa Socio Bosque, PSB): **unclear**
- Indicator 3 (acceptance of PSB): **unclear**
- Indicator 4 (additional area protected): **partly achieved**

		transfer and capacity development.	<ul style="list-style-type: none"> • Output 5 partly achieved (60%): Operationalization of forest monitoring systems: all the countries have received training but not all of them are reporting under the UNFCCC.
REDD+ Benefits: Designing REDD+ Benefit-Sharing Systems that Reduce Poverty	Ghana, Mexico, Peru	Early REDD+ actions are enabled by appropriate, fair and pro-poor benefit-sharing mechanisms that are sufficiently robust to be mainstreamed into long-term national and international REDD+ frameworks.	<ul style="list-style-type: none"> • No list of target indicators available.
Forest protection and REDD (Socio Bosque)	Ecuador	Extend and consolidate forest conservation activities in Ecuador as part of national REDD strategy. Strengthening the forest control service, supporting the Ministry in planning a national REDD+ strategy, and establishing financial mechanisms and monitoring systems.	<ul style="list-style-type: none"> • Indicator 1 (external funding): not achieved • Indicator 2 (institutionalization of Programa Socio Bosque, PSB): unclear • Indicator 3 (acceptance of PSB): unclear • Indicator 4 (additional area protected): partly achieved • Indicator 5 (monitoring): not achieved
Conservation of Tropical Forest – Guyana Protected Area System (GPAS)	Guyana	Support implementation of the Low Carbon Development Strategy (LCDS), achieve quantifiable CO ₂ emission reductions, and meet biodiversity indicators.	<ul style="list-style-type: none"> • Third phase (GPAS III) still ongoing (until 2022), no overall final report available (yet).
REDD – FORECA (Forêts Engagées comme Reservoirs de Carbone)	Madagascar	Assist Government of Madagascar to establish a mechanism for reducing GHG emissions originating from deforestation and forest degradation.	<ul style="list-style-type: none"> • No list of target indicators available. • A monitoring scheme can now be implemented, depending on national interest and commitment. Approaches on how to measure, monitor and sell national efforts in reducing deforestation and forest degradation have been outlined. The four main approaches currently being discussed at international level have been highlighted and evaluated.

